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UNITED STATES DEPARTMENT OF AGRICULTURE

MISCELLANEOUS PUBLICATION No. 232

**LIST OF BULLETINS OF THE
AGRICULTURAL EXPERIMENT STATIONS
FOR THE CALENDAR YEARS
1933 AND 1934**

By

CATHERINE E. PENNINGTON, Junior Librarian

Office of Experiment Stations



WASHINGTON, D. C., FEBRUARY 1936

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**UNITED STATES
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Washington, D. C.

February 1936

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By CATHERINE E. PENNINGTON, *junior librarian, Office of Experiment Stations*

CONTENTS

	Page
List of bulletins.....	1
Index of authors.....	35
Index of subjects.....	47

LIST OF BULLETINS

ALABAMA AGRICULTURAL EXPERIMENT STATION, AUBURN

BULLETINS

239. The use of dry skim milk in the manufacture of cultured buttermilk. E. E. Alldredge and A. D. Burke. Sept. 1933.
240. Factors affecting costs of producing pork in southeast Alabama. J. D. Pope and H. T. Wingate. Feb. 1934.
241. Dairy refrigeration on rural electric lines. E. C. Easter and M. L. Nichols. Apr. 1934.

ALASKA AGRICULTURAL EXPERIMENT STATION, COLLEGE

BULLETIN

11. Forage crops in the Matanuska region, Alaska. H. W. Alberts. May 1933.

ARIZONA AGRICULTURAL EXPERIMENT STATION, TUCSON

BULLETINS

142. Diseases of peas in Arizona. J. G. Brown and M. M. Evans. Jan. 1933.
143. I. Poultry feeding experiments. Harry Embleton.—II. Moulting and housing experiments. H. B. Hinds. Apr. 1933.
144. The financial rehabilitation of irrigation and drainage districts. G. E. P. Smith. Apr. 1933.
145. Factors influencing the cost of production of eggs and pullets in southern Arizona. Harry Embleton and H. C. Morse. Aug. 1933.
146. Production costs and returns from major Salt River Valley field crops, 1928-1930. R. L. Matlock and S. P. Clark. Mar. 1934.
147. Fundamental concepts in plant research. J. F. Breazeale. June 1934.
148. Diseases of field crops in Arizona. J. G. Brown and R. B. Streets. Sept. 1934.

¹ This publication is a continuation of Department Bulletin 1199, the three supplements thereto, and Miscellaneous Publications 65, 128, and 181.

TECHNICAL BULLETINS

45. Experimental production of mottled enamel. M. C. Smith and E. M. Lantz. Jan. 1933.
46. Physiological factors affecting the fruiting of cotton, with special reference to boll shedding. R. S. Hawkins, R. L. Matlock, and Charles Hobart. Jan. 1933.
47. Pecan rosette, soil, chemical, and physiological studies. A. H. Finch and A. F. Kinnison. Mar. 1933.
48. Heart rot of the date palm, caused by *Thielaviopsis paradoxa* (DeSeynes) von Höhn. R. B. Streets. May 1933.
49. The life histories and ecology of jack rabbits, *Lepus alleni* and *Lepus californicus* spp., in relation to grazing in Arizona. C. T. Vorhies and W. P. Taylor. May 1933.
50. Potassium in calcareous soils: Part I, Solubility and availability; Part II, some properties of replaceable potassium. W. T. McGeorge. Aug. 1933.
51. A phytophthora rot of watermelon. J. G. Brown and M. M. Evans. Oct. 1933.
52. The histologic changes in the enamel and dentin of the rat incisor in acute and chronic experimental fluorosis. Isaac Schour and M. C. Smith. June 1934.
53. Plant association and survival, and the build-up of moisture in semi-arid soils. J. F. Breazeale and F. J. Crider. June 1934.
54. Improving the uniformity of cotton fiber by the use of the Pressley sorter. E. H. Pressley. Nov. 1934.

ARKANSAS AGRICULTURAL EXPERIMENT STATION, FAYETTEVILLE

BULLETINS

283. Further studies on the overwintering and dissemination of the fire-blight pathogen. H. R. Rosen. May 1933.
284. Dietary requirements for fertility and lactation: IV, The specific effect of vitamin B on lactation and growth. Barnett Sure, M. C. Kik, D. J. Walker, and M. E. Smith. May 1933.
285. Rural social organization in Washington County, Arkansas. T. C. McCormick. May 1933.
286. Biochemistry and pathology of avitaminosis: I, Hematopoietic function in deficiency diseases. Barnett Sure, M. C. Kik, D. J. Walker, and M. E. Smith. May 1933.
287. Durability of posts, and results of preservative treatment. D. G. Carter, H. T. Barr, and J. B. Woods. May 1933.
288. The effect of variations in the nutrient media upon the nitrogen, phosphorus, and potassium content on plants with special reference to the tomato. R. P. Bartholomew, V. M. Watts, and George Janssen. June 1933.
289. The availability of phosphatic fertilizers. R. P. Bartholomew. June 1933.
290. Soil fertility studies. Martin Nelson. June 1933.
291. Study of rice fertilization. L. C. Kapp. June 1933.
292. Pruning and training tomatoes in Arkansas. V. M. Watts. June 1933.
293. The influence of certain supplements on the production, hatchability, fertility and weight of eggs. R. M. Smith. June 1933.
294. Genetic relations of red plant color, leaf shape and fiber colors in upland cotton. J. O. Ware. June 1933.
295. Laboratory and field studies on the development and control of stem rot of rice. E. C. Tullis and E. M. Cralley. Dec. 1933.
296. Rural social organization in the rice area. T. C. McCormick. Dec. 1933.
297. Summary of research, 1887-1933: Forty-fifth annual report. D. T. Gray [and others]. Apr. 1934.
298. General indicators of the condition of Arkansas banks. B. M. Gile and F. L. Garlock. May 1934.
299. The rice water weevil. Dwight Isely and H. H. Schwardt. May 1934.
300. Genetic relations of nankeen lint to plant color and leaf shape in upland cotton. J. O. Ware. May 1934.
301. Oat variety and production studies. C. K. McClelland. May 1934.
302. Laboratory and greenhouse studies of rice nutrition. L. C. Kapp. May 1934.
303. A study of use of rice by-products for feeding swine and effects on quality of pork. Edgar Martin. June 1934.
304. Rice by-products in the poultry ration for egg production and growth. R. M. Smith. June 1934.
305. Arkansas farm housing conditions and needs. D. G. Carter. June 1934.
306. Arkansas farm house planning. D. G. Carter. June 1934.
307. Permanent pastures. Martin Nelson. May 1934.
308. Control of cotton wilt and "rust." J. O. Ware and V. H. Young. June 1934.
309. The saw-toothed grain beetle as a rice-mill pest. H. H. Schwardt. June 1934.
310. Some effects of nitrogen, phosphorus, and potassium on the composition and growth of tomato plants. George Janssen, R. R. Bartholomew, and V. M. Watts. June 1934.
311. Tax delinquent rural lands in Arkansas. C. O. Brannen. Nov. 1934.
312. Forty-sixth annual report, fiscal year ending June 30, 1934. D. T. Gray [and others]. Nov. 1934.
313. Rural social organization in south-central Arkansas. T. C. McCormick. Dec. 1934.

CALIFORNIA AGRICULTURAL EXPERIMENT STATION, BERKELEY

BULLETINS

549. The economic significance of tree size in western Sierra lumbering. M. R. Brundage, M. E. Krueger, and Duncan Dunning. Jan. 1933.
550. The effect of current interruption in electrical incubation. L. W. Taylor, C. A. Guns, and B. D. Moses. Jan. 1933.
551. Changes occurring during freezing storage and thawing of fruits and vegetables. M. A. Joslyn and G. L. Marsh. May 1933.
552. The classification and evaluation of the soils of western San Diego County. R. E. Storie. June 1933.
553. The efficacy and economic effects of plant quarantines in California. H. S. Smith [and others]. July 1933.
554. Honey marketing in California. E. C. Voorhies, F. E. Todd, and J. K. Galbraith. July 1933.
555. Economic aspects of the bee industry. E. C. Voorhies, F. E. Todd, and J. K. Galbraith. Sept. 1933.
556. An index for rating the agricultural value of soils. R. E. Storie. Sept. 1933.
557. History of cooperation in the marketing of California fresh deciduous fruits. Erich Kraemer and H. E. Erdman. Sept. 1933.
558. Marketing Tokay grapes. E. A. Stokdyk. Sept. 1933.
559. An analysis of the Fresno milk market. J. M. Tinley. Oct. 1933.
560. Vitamin-A deficiency as related to reproduction in range cattle. G. H. Hart and H. R. Guilbert. Oct. 1933.
561. Relation of the candling appearance of eggs to their quality. H. J. Almquist. Nov. 1933.
562. The emergence of pear thrips in the Healdsburg area of California in 1932. L. M. Smith. Nov. 1933.
563. The objectives and activities of the California farm bureau. E. D. Tetreau. Nov. 1933.
564. Bacteriosis (blight) of the English walnut in California and its control. B. A. Rudolph. Dec. 1933.
565. Economic and legal aspects of compulsory proration in agricultural marketing. E. A. Stokdyk. Dec. 1933.
566. Foreign production, trade, and government aid in the raisin and currant industry. Walter Bauer. Dec. 1933.
567. The alfalfa weevil. E. O. Essig and A. E. Michelbacher. Dec. 1933.
568. The effect of pruning in the training of young olive trees. H. E. Jacob. Jan. 1934.
569. Annual index numbers of farm prices, California, 1910-1933. H. J. Stover. Feb. 1934.
570. Determining tonnage of hay in stacks. R. L. Adams. Mar. 1934.
571. The phosphate of southern California soils in relation to citrus fertilization. H. D. Chapman. Apr. 1934.
572. The utilization of El Dorado County land. David Weeks, A. E. Wieslander, and C. L. Hill. May 1934.
573. Irrigation experiments with prunes. A. H. Hendrickson and F. J. Veilmeyer. May 1934.
574. A sixteen-year experiment on apricot pruning. H. S. Reed. May 1934.
575. The digestibility of brown alfalfa hay, sesame meal, and artichoke silage as determined for ruminants. A. H. Folger. May 1934.
576. Some effects of thinning orange fruits. E. R. Parker. July 1934.
577. Spark arresters for motorized equipment. J. P. Fairbank and Roy Bainer. July 1934.
578. Feeding the young pig. E. H. Hughes and Hugh Hart. July 1934.
579. The tank-mixture method for dormant oil spraying of deciduous fruit trees in California. A. D. Borden. July 1934.
580. Thresher and other mechanical injury to seed beans of the lima type. Roy Bainer and H. A. Borthwick. July 1934.
581. Part-time farming for income. R. L. Adams and J. L. Wann. July 1934.
582. California county expenditures. J. K. Galbraith. Aug. 1934.
583. Spray-fumigation treatment for resistant red scale on lemons. H. J. Quayle and Walter Ebeling. Aug. 1934.
584. Forcing gladiolus outdoors by heating the soil with electricity. J. R. Tavernetti and S. L. Emsweller. Oct. 1934.
585. Avocado diseases in California. W. T. Horne. Nov. 1934.
586. Fire blight of pears and related plants. H. E. Thomas and P. A. Ark. Nov. 1934.

HILGARDIA

- Vol. 7, no. 8. Field observations on the beet leafhopper, *Eutettix tenellus*, in California. H. H. P. Severin. Jan. 1933.
- Vol. 7, no. 9. The use of arsenical compounds in the control of deep-rooted perennial weeds. A. S. Crafts. Apr. 1933.
- Vol. 7, no. 10. Reproduction without males in aseptic root cultures of the root-knot nematode; development of the root-knot nematode as affected by temperature. Jocelyn Tyler. Apr. 1933.

- Vol. 7, no. 11. A comparison of *Aonidiella aurantii* and *Aonidiella citrina*, including a study of the internal anatomy of the latter. R. G. Nel. Apr. 1933.
- Vol. 7, no. 12. The biology of the bean thrips. S. F. Bailey. June 1933.
- Vol. 7, no. 13. The epidemiology of fig spoilage. A. E. Davey and R. E. Smith. July 1933.
- Vol. 7, no. 14. Effect of covercrops on the soil solution at different depths under orchard conditions. E. L. Proebsting. Aug. 1933.
- Vol. 7, no. 15. Watermelon breeding. D. R. Porter. Sept. 1933.
- Vol. 7, no. 16. Methods of breeding onions. H. A. Jones and S. L. Emsweller. Sept. 1933.
- Vol. 8, no. 1. Some properties of the curly-top virus. H. H. P. Severin and J. H. Freitag. Oct. 1933.
- Vol. 8, no. 2. The penetration of insecticidal oils into porous solids. W. M. Hoskins. Nov. 1933.
- Vol. 8, no. 3. Bacterial canker of stone-fruit trees in California. E. E. Wilson. Dec. 1933.
- Vol. 8, no. 4. Sulfuric acid as a penetrating agent in arsenical sprays for weed control. A. S. Crafts. Dec. 1933.
- Vol. 8, no. 5. Principles governing the reclamation of alkali soils. W. P. Kelley and S. M. Brown. Jan. 1934.
- Vol. 8, no. 6. Density and arrangement of vines. F. T. Bioletti and A. J. Winkler. Apr. 1934.
- Vol. 8, no. 7. The inheritance of resistance to rust in the snapdragon. S. L. Emsweller and H. A. Jones.—Thrips resistance in the onion. H. A. Jones, S. F. Bailey, and S. L. Emsweller. June 1934.
- Vol. 8, no. 8. Ornamental flowering plants naturally infected with curly-top and aster-yellows viruses. H. H. P. Severin and J. H. Freitag.—Weed host range and overwintering of curly-top virus. H. H. P. Severin. Sept. 1934.
- Vol. 8, no. 9. Vitamin-A deficiency in turkeys. W. R. Hinshaw and W. E. Lloyd. Sept. 1934.
- Vol. 8, no. 10. Experiments with the aster-yellows virus from several states. H. H. P. Severin.—Transmission of California aster-yellows to potato by *Cicadula divisa*. H. H. P. Severin and F. A. Haasis.—Transmission of California aster and celery-yellows virus by three species of leafhoppers. H. H. P. Severin. Oct. 1934.
- Vol. 8, no. 11. Bionomics of the walnut husk fly, *Rhagoletis completa*. A. M. Boyce. Oct. 1934.

COLORADO AGRICULTURAL EXPERIMENT STATION, FORT COLLINS

BULLETINS

399. The alfalfa weevil in Colorado. J. H. Newton. Feb. 1933.
400. Potato flea-beetle control. L. B. Daniels. May 1933.
401. Pyrethrum investigations in Colorado: I, Preliminary report on factors affecting pyrethrin content. C. B. Gnadinger, L. E. Evans, and C. S. Corl. July 1933.
402. Collar rot of tomatoes. W. A. Kreutzer and L. W. Durrell. Aug. 1933.
403. Colorado weeds. B. J. Thornton and L. W. Durrell. Sept. 1933.
404. Wheat production in Colorado, 1926-1932. D. W. Robertson [and others]. Sept. 1933.
405. Planning for lamb-feeding. H. R. Lascelles. Sept. 1933.
406. County consolidation in Colorado. S. R. Heckart and G. S. Klemmedson. Dec. 1933.
407. Celery production in Colorado. A. M. Binkley. Feb. 1934.
408. Flower gardens for Colorado. G. A. Beach. Mar. 1934.
409. Feedlot diseases of lambs. I. E. Newsom and Floyd Cross. Mar. 1934.
410. The tomato psyllid and the control of psyllid yellows of potatoes. L. B. Daniels. June 1934.
411. Lime-sulfur for tomato psyllid control. G. M. List. June 1934.
412. Growing potatoes in Colorado. C. H. Metzger. July 1934.
413. County government in Colorado. H. C. Pepper. Aug. 1934.

TECHNICAL BULLETINS

2. Comparison of methods for estimating available phosphorus in alkaline calcareous soils. R. D. Hockensmith, Robert Gardner, and James Goodwin. Mar. 1933.
3. The rating and use of current meters. Carl Rohwer. May 1933.
4. Studies on changes in vitamin content of alfalfa hay. Earl Douglass, J. W. Tobiska, and C. E. Vail. May 1933.
5. Dormancy in small-grain seeds. G. W. Deming and D. W. Robertson. Aug. 1933.
6. Nitric nitrogen in the soils of the Arkansas Valley. Robert Gardner, Alvin Kezer, and J. C. Ward. Feb. 1934.
7. Grasshopper-bait tests in Colorado. F. T. Cowan. Mar. 1934.
8. A preliminary study of the fruiting habit of the black raspberry, *Rubus occidentalis*. G. A. Beach. Mar. 1934.
9. The influence of chemical and physical factors on egg-white foams. M. A. Barmore. July 1934.
10. Statistical methods of analysis applied to the feedlot gains of lambs. J. C. Foster. Sept. 1934.
11. Studies on the critical period for applying irrigation water to wheat. D. W. Robertson, Alvin Kezer, John Sjogren, and Dwight Koonce. Nov. 1934.

CONNECTICUT (STATE) AGRICULTURAL EXPERIMENT STATION, NEW HAVEN

BULLETINS

344. Plant pest handbook for Connecticut: I, Insects. W. E. Britton. Jan. 1933.
345. Dedication of Jenkins Laboratory, October 11, 1932. Jan. 1933.
346. The composition of some commercial insecticides, fungicides, bactericides, rodenticides and weed killers, a compilation, supplement to Bulletin 300. H. J. Fisher and E. M. Bailey. Feb. 1933.
347. Report of the director for the year ending October 31, 1932. W. L. Slate. Mar. 1933.
348. The birch leaf-mining sawfly (*Fenusa pumila* Klug). R. B. Friend. Feb. 1933.
349. Connecticut state entomologist, thirty-second report, 1932. W. E. Britton. Mar. 1933.
350. Tobacco substation at Windsor, report for 1932. T. R. Swanback, O. E. Street, and P. J. Anderson. Apr. 1933.
351. Commercial feeding stuffs, report on inspection, 1932. E. M. Bailey. Apr. 1933.
352. Chemical investigations of the tobacco plant: IV, The effect of the curing process on the organic acids of tobacco leaves. H. B. Vickery and G. W. Pucher. June 1933.
353. Studies on parasites of the oriental fruit moth: I, *Trichogramma*. J. C. Schread and Philip Garman. June 1933.
354. The thirty-seventh report on food products and the twenty-fifth report on drug products, 1932. E. M. Bailey. July 1933.
355. Commercial fertilizers, report for 1933. E. M. Bailey. Oct. 1933.
356. Studies on parasites of the oriental fruit moth: II, *Macrocentrus*. Philip Garman and W. T. Brigham. Dec. 1933.
357. Report of the director for the year ending October 31, 1933. W. L. Slate. Jan. 1934.
358. Plant pest handbook for Connecticut: II, Diseases and injuries. G. P. Clinton. Feb. 1934.
359. Tobacco substation at Windsor, report for 1933. P. J. Anderson, T. R. Swanback, and O. E. Street. Feb. 1934.
360. Connecticut state entomologist, thirty-third report, 1933. W. E. Britton. Mar. 1934.
361. Crossed sweet corn. D. F. Jones and W. R. Singleton. Apr. 1934.
362. Commercial feeding stuffs, report on inspection, 1933. E. M. Bailey. Apr. 1934.
363. The thirty-eighth report on food products and the twenty-sixth report on drug products, 1933. E. M. Bailey. July 1934.
364. Tobacco culture in Connecticut. P. J. Anderson. Sept. 1934.
365. Commercial fertilizers, report for 1934. E. M. Bailey. Oct. 1934.

CONNECTICUT (STORRS) AGRICULTURAL EXPERIMENT STATION, STORRS

BULLETINS

183. Potatoes. Apr. 1933.
184. Infectious bovine mastitis: I, The bromthymol blue test in the diagnosis of mastitis. W. N. Plastring and E. O. Anderson. May 1933.
185. Bovine infectious abortion: Twelfth report, A study of agglutination reactions in the diagnosis of Bang's abortion disease. G. C. White, R. E. Johnson, W. N. Plastring, and R. P. Reece. June 1933.
186. Pasture investigations: Second report, Penetration of surface applied lime and phosphates in the soil of permanent pastures. B. A. Brown and R. I. Munsell. June 1933.
187. Pasture investigations: Third report, Effect of fertilizers on the botanical and chemical composition of the vegetation in permanent pastures. B. A. Brown. July 1933.
188. Studies on yeast-like fungi from gallinaceous birds. Erwin Jungherr. July 1933.
189. Pasture investigations: Fourth report, Effect of fertilizers on the total and seasonal production. B. A. Brown. Aug. 1933.
190. Pasture investigations: Fifth report, A resume of thirteen years of research. B. A. Brown. Aug. 1933.
191. Types of farming in the eastern Connecticut Highland. I. G. Davis. Aug. 1933.
192. Report of the director for the year ending June 30, 1933. W. L. Slate. Sept. 1933.
193. Studies on the creper fowl: VI, Skeletal growth of creper chickens. Walter Landauer. Jan. 1934.
194. The recreational uses of land in Connecticut. N. L. Whetten and V. A. Rapport. Mar. 1934.
195. Infectious bovine mastitis: 2, The streptococci of chronic bovine mastitis. W. N. Plastring, E. O. Anderson, G. D. Brigham, and E. H. Spaulding. Mar. 1934.
196. Population mobility in rural Connecticut. J. L. Hypes. Aug. 1934.
197. Infectious bovine mastitis: 3, Methods of control. W. N. Plastring, E. O. Anderson, G. C. White, and L. F. Rettger. Aug. 1934.
198. Corn silage feeding investigations: Ninth paper, The role of succulence in the dairy ration and water consumption with different rations. G. C. White and R. E. Johnson. Sept. 1934.
199. Report of the director for the year ending June 30, 1934. W. L. Slate. Sept. 1934.
200. Studies on fowl paralysis: I, Diagnosis. Erwin Jungherr. Nov. 1934.

DELAWARE AGRICULTURAL EXPERIMENT STATION, NEWARK

BULLETINS

180. (Technical bulletin 13.) Cabbage characters and their heredity. L. R. Detjen and C. A. McCue. Jan. 1933.
181. The problem of mosquito control in Delaware. L. A. Stearns, Donald MacCreary, and N. P. Newhouse. Jan. 1933.
182. Studies in taxation: Financing education in Delaware. M. M. Daugherty. Nov. 1932.
183. Ground soybeans as a protein supplement for growing chicks. A. E. Tomhave and C. W. Mumford. May 1933.
184. The efficiency of certain proprietary oil emulsions, Volck and Orthol-K, for control of the oriental fruit moth. Donald MacCreary. June 1933.
185. The marketing of Delaware early apples. H. S. Gabriel. June 1933.
186. (Technical bulletin 14.) A study of the colloidal fraction of subsoils from the standpoint of electrodi-
alizable bases and buffering. P. B. Myers and G. M. Gilligan. Oct. 1933.
187. (Technical bulletin 15.) Fruit jellies: VIII, The role of pectin: 4, The physico-chemical properties of
pectin. P. B. Myers and G. L. Baker. Mar. 1934.
188. Annual report of the director for the fiscal year ending June 30, 1933. C. A. McCue [and others].
Mar. 1934.
189. Pasture investigations in southern Delaware. G. L. Schuster and C. E. Phillips. May 1934.
190. Economic readjustment in the dairy industry in Delaware. R. O. Bausman. June 1934.
191. A study of the Wilmington curb market. H. S. Gabriel. Nov. 1934.

FLORIDA AGRICULTURAL EXPERIMENT STATION, GAINESVILLE

BULLETINS

257. The pollination of avocados. A. B. Stout. Mar. 1933.
258. The pecan shuckworm. F. W. Walker. Apr. 1933.
259. (Technical bulletin.) Changes in composition of Florida avocados in relation to maturity. A. L.
Stahl. May 1933.
- ✓ 260. Beef production in Florida. A. L. Shealy. June 1933.
261. Ornamental trees. Harold Mowry. June 1933.
262. (Technical bulletin.) Effect of calcium-deficient roughages upon milk production and welfare of
dairy cows. R. B. Becker, W. M. Neal, and A. L. Shealy. June 1933.
263. Farmers' cooperative associations in Florida: II, Organization and management. M. A. Brooker and
H. G. Hamilton. June 1933.
- ✓ 264. Stiffs or sweeny (phosphorus deficiency) in cattle. R. B. Becker, W. M. Neal, A. L. Shealy, and Gus
York. Dec. 1933.
265. (Technical bulletin.) Effect of frequent fires on chemical composition of forest soils in the longleaf pine
region. Frank Heyward and R. M. Barnette. Mar. 1934.
266. A study of the cost of handling citrus fruit from the tree to the car in Florida. H. G. Hamilton and
M. A. Brooker. Apr. 1934.
267. (Technical bulletin.) Studies on the ring spot disease of sugarcane. B. A. Bourne. May 1934.
268. (Technical bulletin.) The pectic constituents of citrus fruits. L. W. Gaddum. June 1934.
- ✓ 269. (Technical bulletin.) Effect of frequent cutting and nitrate fertilization on the growth behavior and
relative composition of pasture grasses. W. A. Leukel, J. P. Camp, and J. M. Coleman. July
1934.
270. Fertilizer experiments with pecans. G. H. Blackmon and R. W. Ruprecht. Aug. 1934.
271. (Technical bulletin.) The asparagus caterpillar, its life history and control. J. W. Wilson. Sept.
1934.
272. Avocado production in Florida. H. S. Wolfe, L. R. Toy, and A. L. Stahl. Oct. 1934.
273. A preliminary report on zinc sulphate as a corrective for bronzing of tung trees. Harold Mowry and
A. F. Camp. Dec. 1934.

GEORGIA AGRICULTURAL EXPERIMENT STATION, EXPERIMENT

BULLETINS

174. Farm prices of cotton related to its grade and staple length in Georgia, seasons 1929-30 and 1930-31.
L. D. Howell and W. T. Fullilove. Jan. 1933.
175. Spraying cantaloupes for the control of downy mildew and other diseases. Frank Van Haltern. Mar.
1933.
176. Relation of the root system of pecan trees to nursery and orchard practices. J. G. Woodroof. June
1933.
177. The vitamin A content of pimiento pepper. Leah Ascham. Sept. 1933.
178. Pecan mycorrhizas. N. C. Woodroof. Nov. 1933.
179. The utilization of pimiento pepper in the diet. Leah Ascham. Nov. 1933.

180. The cost of living for 57 industrial families and for 98 farm families in Georgia. E. S. Jones. Dec. 1933.
181. Sweet potatoes as a feed for swine. F. R. Edwards and Z. A. Massey. Apr. 1934.
182. A study of ammonia and nitrate nitrogen for cotton: II. Influence on fruiting and on some organic constituents. K. T. Holley, T. G. Dulin, and T. A. Pickett. May 1934.
183. The quantitative relation of egg yolk pigmentation to pimiento feeds. W. L. Brown. May 1934.
184. Beef cattle production in Georgia. F. R. Edwards and Z. A. Massey. Sept. 1934.
185. Muscadine grapes, culture, varieties, and some properties of juices. W. D. Armstrong, T. A. Pickett, and M. M. Murphy, Jr. Nov. 1934.
186. Important diseases of pepper in Georgia. B. B. Higgins. Dec. 1934.

HAWAII AGRICULTURAL EXPERIMENT STATION, HONOLULU

BULLETINS

67. Cane molasses in poultry rations. C. M. Bice. June 1933.
68. Japanese foods commonly used in Hawaii. C. D. Miller. 1933.
69. Cane molasses as a supplement to fattening rations for swine. L. A. Henke. Nov. 1933.
70. The manufacture of poi from taro in Hawaii, with special emphasis upon its fermentation. O. N. Allen and E. K. Allen. Nov. 1933.
71. Citrus culture in Hawaii. W. T. Pope. May 1934.
72. Napier grass (*Pennisetum purpureum*), a pasture and green fodder crop for Hawaii. C. P. Wilsie and Makoto Takahashi. 1934.
73. Cane molasses as a feed for dairy cows. L. A. Henke. Nov. 1934.

IDAHO AGRICULTURAL EXPERIMENT STATION, MOSCOW

BULLETINS

197. Work and progress of the agricultural experiment station for the year ending December 31, 1932. E. J. Iddings. May 1933.
198. Profitable systems of farming for the Idaho Falls area. P. A. Eke and N. W. Johnson. June 1933.
199. Adaptability of alfalfa strains and varieties for Idaho. H. W. Hulbert, J. H. Christ, and J. L. Toevs. Dec. 1933.
200. Codling moth control in Idaho. Claude Wakeland and R. W. Haegle. Feb. 1934.
201. Reseeding burned-over lands in northern Idaho. J. H. Christ. Apr. 1934.
202. Prolonging plowshare service. Hobart Beresford and E. N. Humphrey. Apr. 1934.
203. The bin method of mixing feed. Hobart Beresford and F. W. Atkeson. May 1934.
204. Alcohol-gasoline engine fuels. Harry Miller. June 1934.
205. Science aids Idaho farmers: Annual report of the experiment station for the year ending December 31, 1933. E. J. Iddings. May 1934.
206. Alfalfa seed screenings as a feed for dairy cows. F. W. Atkeson, T. R. Warren, and R. F. Johnson. May 1934.
207. Types of farming in Idaho: Part I, Agricultural resources and factors affecting their use. H. A. Vogel and N. W. Johnson. May 1934.
208. Types of farming in Idaho: Part II, The type of farming areas. N. W. Johnson and H. A. Vogel. June 1934.
209. Fattening Idaho range cattle. C. W. Hickman, E. F. Rinehart, and R. F. Johnson. June 1934.
210. Index numbers of Idaho farm prices. C. O. Youngstrom. June 1935.
211. A varietal study of the susceptibility of sweet cherries to cracking. L. R. Tucker. Dec. 1934.

RESEARCH BULLETIN

11. An investigation of the *Lygus* species which are pests of beans (Hemiptera, Miridae). W. E. Shull. May 1933.

ILLINOIS AGRICULTURAL EXPERIMENT STATION, URBANA

BULLETINS

388. Shrinkage of hogs from farm to market by truck and by rail. R. C. Ashby. Jan. 1933.
389. Certain biological factors related to tallowiness in milk and cream. P. H. Tracy, R. J. Ramsey, and H. A. Ruehe. Apr. 1933.
390. Some important factors affecting costs in hog production. R. H. Wilcox, W. E. Carroll, and T. G. Hornung. June 1933.
391. Types and varieties of corn for silage, yield of nutrients, composition, feeding value for milk production. W. B. Nevens. June 1933.
392. Local group organization among Illinois farm people. D. E. Lindstrom. June 1933.
393. Some effects of severity of pruning on growth and production in Concord grape. A. S. Colby and L. R. Tucker. July 1933.
394. Sweet clover in Illinois. O. H. Sears, J. J. Pieper, and W. L. Burlison. July 1933.

395. A study of the cost of horse and tractor power on Illinois farms. P. E. Johnston and J. E. Wills. Dec. 1933.
396. Quality of market cream in Illinois, factors affecting it and methods for improvement. C. A. Brown. Jan. 1934.
397. Prices and consumption of milk in specific cities, as related to industrial payrolls and other economic factors. R. W. Bartlett. Jan. 1934.
398. Crop yields from Illinois soil experiment fields in 1932, together with a general summary for the rotation periods ending in 1932. F. C. Bauer. Jan. 1934.
399. Farm real-estate valuation in Illinois, with special reference to township averages, an analysis of 1930 census data and supplementary information for previous and subsequent dates. C. L. Stewart. Mar. 1934.
400. Experiments in the use of old soil in growing carnations and roses. F. F. Weinard and S. W. Decker. Mar. 1934.
401. Asparagus yields as affected by severity of cutting. E. P. Lewis. Apr. 1934.
402. Crop yields from Illinois soil experiment fields in 1933, together with a general summary for four-year period ending in 1933. F. C. Bauer. May 1934.
403. Types of farming in Illinois, an analysis of differences by areas. H. C. M. Case and K. H. Myers. June 1934.
404. Production and marketing of redtop, including a study of the place of redtop in the organization of southern Illinois farms. W. L. Burlison, C. L. Stewart, R. C. Ross, and O. L. Whalin. June 1934.
405. Response of Illinois soils to limestone. F. C. Bauer. June 1934.
406. Living expenditures of a group of Illinois farm families, 1930, 1931, 1932. R. C. Freeman. Sept. 1934.
407. A study of the causes of a stale metallic flavor in strawberry ice cream, together with tests of methods of packing berries. P. H. Tracy, R. J. Ramsey, and H. A. Ruehe. Nov. 1934.
408. Local livestock markets in relation to corn-belt hog marketing. R. C. Ashby. Dec. 1934. Also abstract edition.
409. Effects of prolonged storage on forcing qualities of summer-budded roses. F. F. Weinard and S. W. Decker. Dec. 1934.
410. Factors influencing the refrigeration of packages of apples. J. W. Lloyd and S. W. Decker. Dec. 1934.

SOIL REPORTS

54. Ford County soils. R. S. Smith, E. E. DeTurk, F. C. Bauer, and L. H. Smith. Apr. 1933.
55. Jackson County soils. E. A. Norton, R. S. Smith, E. E. DeTurk, F. C. Bauer, and L. H. Smith. June 1933.
56. Schuyler County soils. E. A. Norton, R. S. Smith, E. E. DeTurk, F. C. Bauer, and L. H. Smith. Mar. 1934.

INDIANA AGRICULTURAL EXPERIMENT STATION, LAFAYETTE

BULLETINS

370. Marketing Indiana sweet potatoes. F. C. Gaylord and H. M. Cleaver. Jan. 1933.
371. Cattle feeding: Winter steer feeding, 1928-29, 1929-30, 1930-31. J. H. Skinner and F. G. King. Jan. 1933.
372. Grinding grains for dairy cows. J. W. Wilbur. Mar. 1933.
373. The value of grinding grains for young dairy calves. J. H. Hilton, J. W. Wilbur, and T. E. Hienton. Mar. 1933.
374. Cooling cream at the buying station and keeping it cool while in transit to the creamery. V. C. Manhart, B. E. Horrall, and T. E. Hienton. Mar. 1933.
375. Some of the factors affecting the body and texture of ice cream. B. E. Horrall. Mar. 1933.
376. Marginal farm land in southern Indiana. G. E. Young. Mar. 1933.
377. A paper test for the detection of mastitis. B. E. Horrall. Mar. 1933.
378. Labor and power used in crop production in central Indiana. E. C. Young and G. W. Collier. Feb. 1933.
379. The value of ice in reducing fall temperatures in an air-cooled apple storage in southern Indiana. C. E. Baker and I. D. Mayer. Apr. 1933.
380. Artificial radiation as a means of forcing greenhouse crops. R. B. Withrow and M. W. Richman. Apr. 1933.
381. The relation of apple spray schedules to the arsenious oxide and lead residues. G. E. Marshall and O. W. Ford. Apr. 1933.
382. A preliminary study of Indiana dairying from the standpoint of marketing. R. D. Canan. Apr. 1933.
383. Effect of the time element in marketing cream for buttermaking on quality. V. C. Manhart. May 1933.
384. A simple and rapid chemical test on plant material as an aid in determining potassium needs. S. F. Thornton. May 1933.
385. A study of the action of the proteolytic enzymes of specific organisms upon the proteins of milk and upon gelatine. George Spitzer, E. H. Parfitt, and W. F. Epple. Sept. 1933.

386. Nitrogenous fertilizers for top-dressing field crops. A. T. Wiancko, G. P. Walker, and R. R. Mulvey. Nov. 1933.
387. Prices of farm products in northwestern Indiana. Lynn Robertson and F. V. Smith. Feb. 1934.
388. The economic significance of the non-farming rural population in northwestern Indiana. Lynn Robertson. Feb. 1934.
389. Adjusting central Indiana farming to corn borer conditions. G. W. Collier and Lynn Robertson. Mar. 1934.
390. Cooperative shipping of eggs in a general farming community of Indiana. E. R. Menefee. Mar. 1934.
391. Studies in Indiana farmwoods: Woodland carrying capacities and grazing injury studies. Daniel DenUyl and R. K. Day. Mar. 1934.
392. Marketing vegetables produced on northern Indiana muck soils. F. C. Gaylord and H. M. Cleaver. Mar. 1934.
393. Storage conditions, quality, price trends, and their relation to profitable onion storage. H. M. Cleaver. Mar. 1934.
394. Tomato quality studies: Field and harvest factors affecting grade. F. C. Gaylord and J. H. MacGillivray. Mar. 1934.
395. Marketing crossties and piling in southern Indiana. R. C. Brundage. Mar. 1934.

IOWA AGRICULTURAL EXPERIMENT STATION, AMES

BULLETINS

297. Wind electric plants. E. G. McKibben and J. B. Davidson. Apr. 1933.
298. Effects of inoculation and liming on soybeans grown on the Grundy silt loam. R. H. Walker and P. E. Brown. Apr. 1933.
299. Corn preparation with alfalfa and silage for fattening lambs. J. M. Evvard, P. S. Shearer, C. C. Culbertson, and Q. W. Wallace. Apr. 1933.
300. The agar disc method for studying the contamination from metal surfaces. H. C. Olson and B. W. Hammer. May 1933.
301. Linebreeding. J. L. Lush. May 1933.
302. The design and construction of masonry water supply tanks. Henry Giese and J. B. Davidson. June 1933.
303. Thermal conductivity and surface treatment of silo walls. Henry Giese. June 1933.
304. What determines the length of life of prepared roll roofings? Henry Giese, H. J. Barre, and J. B. Davidson. June 1933.
305. Effects of inoculation and liming on alfalfa grown on the Grundy silt loam. R. H. Walker and P. E. Brown. June 1933.
306. Cooperation in agriculture, livestock marketing. P. L. Miller and Geoffrey Shepherd. Aug. 1933.
307. Corporate-owned land in Iowa. W. G. Murray and R. C. Bentley. Sept. 1933.
308. Irrigation for vegetable crops in Iowa. A. T. Erwin and E. S. Haber. Mar. 1934.
309. Soybeans in Iowa farming. Albert Mighell, H. D. Hughes, and F. S. Wilkins. Apr. 1934.
310. Prospects for agricultural recovery: I, The economic situation in 1933. Geoffrey Shepherd. Dec. 1933.
311. Prospects for agricultural recovery: II, Refinancing farm mortgages in Iowa. W. G. Murray. Dec. 1933.
312. Prospects for agricultural recovery: III, Estimating advantages of the corn-hog plan to the individual farm. J. A. Hopkins, Jr. Jan. 1934.
313. Prospects for agricultural recovery: IV, National economic planning. Geoffrey Shepherd. Jan. 1934.
314. Prospects for agricultural recovery: V, Is our national farm plant too large? T. W. Schultz. Mar. 1934.
315. Prospects for agricultural recovery: VI, Farm mortgage policy. W. G. Murray. Apr. 1934.
316. Prospects for agricultural recovery: VII, Requirements for economic plans affecting agriculture. J. A. Hopkins, Jr. July 1934.
317. Prospects for agricultural recovery: VIII, Who pays for the hog reduction program? Geoffrey Shepherd. July 1934.
318. The destination of Iowa's commercial corn. R. C. Bentley. June 1934.
319. Improving the domestic market for lard. Rainer Schickele and T. W. Schultz. June 1934.
320. The lard market at home and abroad. Rainer Schickele and T. W. Schultz. June 1934.
321. Membership problems and relationships in Iowa farmers' elevators. Frank Robotka. July 1934.
322. Harvesting alfalfa with a windrow pick-up baler. J. B. Davidson and W. H. Carter. Oct. 1934.
323. The place of pasture in Iowa farming. E. B. Hurd and H. L. Thomas. Oct. 1934.

RESEARCH BULLETINS

155. The relationship of acetylmethylcarbinol and diacetyl to butter cultures. M. B. Michaelian, R. S. Farmer, and B. W. Hammer. Jan. 1933.
156. An economic analysis of farm mortgages in Story County, Iowa, 1854-1931. W. G. Murray. Jan. 1933.
157. The Winogradsky spontaneous culture method for determining certain soil deficiencies. A. W. Young. Apr. 1933.
158. The production of gum by certain species of *Rhizobium*. D. A. Anderson. Apr. 1933.

159. Bacteriology of butter: V, Studies on the microorganisms in churns. H. C. Olson and B. W. Hammer. May 1933.
160. The uses of efficiency factors in analysis of farm records. J. A. Hopkins, Jr. June 1933.
161. Variations in swine prices within Iowa, including a study in statistical procedure. T. W. Schultz and A. G. Black. June 1933.
162. Effect of time, depth and method of plowing upon yield and eradication of biennial sweet clovers. F. S. Wilkins and E. V. Collins. June 1933.
163. Factors affecting experimental error in field plot tests with corn. A. A. Bryan. June 1933.
164. Annual fluctuations in the price of corn. Geoffrey Shepherd. June 1933.
165. The relation of moisture to respiration and heating in stored oats. A. L. Bakke and N. L. Noecker. June 1933.
166. The pathogenicity and seasonal development of *Gymnosporangium* in Iowa. D. E. Bliss. Nov. 1933.
167. Resistance of dent corn to *Basisporium gallarum* Moll. C. S. Reddy. Nov. 1933.
168. Pathogenicity, host reponse and control of *Cercospora* leaf-spot of sugar beets. E. F. Vestal. Dec. 1933.
169. The numbers of lipolytic bacteria in various dairy products, as determined with Nile-blue sulfate. B. W. Hammer and M. A. Collins. Jan. 1934.
170. Growth responses of the gladiolus as influenced by storage temperatures. D. C. Fairburn. Feb. 1934.
171. Competitive position of lard in the market of animal and vegetable fats and oils. Rainer Schickele and T. W. Schultz. Mar. 1934.
172. Factors influencing a malformation of the leg bones of growing chickens. T. T. Milby. June 1934.
173. The metabolism of some nitrogen-fixing Clostridia. W. H. Willis. June 1934.
174. Status of farm housing in Iowa. M. G. Reid. Sept. 1934.
175. Chemistry of butter and butter making: II, The nature of the fatty materials in buttermilk and the significance of certain buttermilk testing methods. E. W. Bird, D. F. Breazeale, and G. C. Sands. Mar. 1935.
176. Physiologic factors affecting the germination of seed corn. J. L. Robinson. Oct. 1934.
177. Iowa's population prospect. P. K. Whelpton. Oct. 1934.

SOIL REPORTS

69. Pocahontas County soils. P. E. Brown, A. M. O'Neal, and H. R. Meldrum. June 1933.
70. Butler County soils. P. E. Brown, J. A. Elwell, H. R. Meldrum, and R. E. Bennett. June 1933.
71. Sac County soils. P. E. Brown, C. L. Orrben, H. R. Meldrum, and R. E. Bennett. June 1933.
72. Calhoun County soils. P. E. Brown, T. H. Benton, W. J. Leighty, and H. R. Meldrum. June 1933.

KANSAS AGRICULTURAL EXPERIMENT STATION, MANHATTAN

BULLETINS

264. Lamb feeding experiments with Atlas sorgo. R. F. Cox and W. E. Connell. May 1933.
265. Sorghum production in Kansas. H. H. Laude and A. F. Swanson. July 1933.
266. Varieties of sorghum in Kansas. A. F. Swanson and H. H. Laude. Apr. 1934.
267. Lawns in Kansas. J. W. Zahnley and L. R. Quinlan. May 1934.
268. The comparative nutritive value of sorghum grain, corn, and wheat as poultry feeds. L. F. Payne. June 1934.
269. Field bindweed and methods of control. J. W. Zahnley and W. F. Pickett. July 1934.
270. Hardy trees and shrubs for western Kansas. E. W. Johnson. Sept. 1934.

TECHNICAL BULLETINS

34. The effect of inadequate rations on the production and hatchability of eggs. L. F. Payne and J. S. Hughes. Jan. 1933.
35. Resistance of varieties of winter wheat and rye to low temperature in relation to winter hardiness and adaptation. S. C. Salmon. July 1933.
36. The relation of phosphorus deficiency to the utilization of feed in dairy cattle. W. H. Riddell, J. S. Hughes, and J. B. Fitch. June 1934.
37. The influence of some factors on the hatchability of the hen's egg. D. C. Warren. June 1934.
38. Effect of burning on Kansas bluestem pastures. A. E. Aldous. Nov. 1934.

KENTUCKY AGRICULTURAL EXPERIMENT STATION, LEXINGTON

BULLETINS

337. (Research bulletin.) Cod liver oil for laying pullets. J. H. Martin and W. M. Insko, Jr. Feb. 1933.
338. (Research bulletin.) Hemolytic streptococci of horses and other animals, and their relation to the streptococci of man. W. W. Dimock and P. R. Edwards. May 1933.
339. (Research bulletin.) Black-stem of alfalfa, red clover and sweet clover. E. M. Johnson and W. D. Valleau. May 1933.

340. Commercial feeds in Kentucky in 1932. J. D. Turner [and others]. May 1933.
341. (Research bulletin.) Resistance of red clovers to *Sclerotinia trifoliorum* Erik., and infection studies. W. D. Valleau, E. N. Fergus, and Lawrence Henson. June 1933.
342. (Research bulletin.) The iron and copper content of egg yolk. S. E. Erikson, R. E. Boyden, J. H. Martin, and W. M. Insko, Jr. June 1933.
343. The use of credit on selected Kentucky farms. C. J. Bradley. June 1933.
344. Marketing Kentucky livestock by motor truck. C. D. Phillips. July 1933.
345. The use and expense of farm implements. G. B. Byers and B. T. Inman. Dec. 1933.
346. (Research bulletin.) The effect of confinement brooding on growth and egg production. G. D. Buckner, J. H. Martin, and W. M. Insko, Jr. Jan. 1934.
347. Factors for successful farm management in Todd, Christian, and Warren Counties. W. L. Rouse. Apr. 1934.
348. (Research bulletin.) The relation of time of cutting to leafhopper injury to alfalfa. H. H. Jewett. Apr. 1934.
349. (Research bulletin.) Studies of frenching of tobacco. P. E. Karraker and C. E. Bortner. Apr. 1934.
350. Rural organization contacts in three Kentucky communities. Fred Boyd, Merton Oyler, and W. D. Nicholls. Apr. 1934.
351. Farm organization and family incomes in Knott County, Kentucky. W. D. Nicholls and W. L. Rouse. July 1934.
352. An index of farm real-estate taxes in Kentucky. C. J. Bradley, H. B. Price, and B. W. Allin. Oct. 1934.
353. The control of fruit pests. C. O. Eddy, W. D. Valleau, and W. W. Magill. Oct. 1934.
354. (Research bulletin.) Acidosis of pregnant ewes, so-called pregnancy disease of sheep. W. W. Dimock, D. J. Healy, and F. E. Hull. Nov. 1934.
355. Farm taxes and local government in Crittenden and Livingston Counties, Kentucky. T. B. Manny, B. W. Allin, and C. J. Bradley. Dec. 1934.

LOUISIANA AGRICULTURAL EXPERIMENT STATION, BATON ROUGE

BULLETINS

233. Factors in the organization and successful operation of Louisiana rice farms, 1930. R. J. Saville. Jan. 1933.
234. Farm trade centers in Louisiana 1901 to 1931. T. L. Smith. Jan. 1933.
235. Review of six seasons work in Louisiana in controlling the sugar cane moth borer by field colonizations of its egg parasite *Trichogramma minutum* Riley. W. E. Hinds, B. A. Osterberger, and A. L. Dugas. Jan. 1933.
236. Hogging off corn and sweet potatoes. C. I. Bray and J. B. Francioni, Jr. Mar. 1933.
237. The use of cyanamid as a source of nitrogen for sugar cane in Louisiana. A. K. Smith, Jr. June 1933.
238. A comparison of cottonseed hulls and grass hays for milk production. R. H. Lush, C. H. Staples, J. L. Fletcher, and Sidney Stewart. July 1933.
239. Irish potato investigations. J. C. Miller and W. D. Kimbrough. Sept. 1933.
240. Sugarcane borer effect upon value of seed cane. W. E. Hinds and B. A. Osterberger. Sept. 1933.
241. Grain as a supplement to pasture and other roughage for milk production. R. H. Lush. Oct. 1933.
242. Value of rice by-products as feeds. [Summary of work at Louisiana and other stations.] R. H. Lush, C. I. Bray, and C. W. Upp. Oct. 1933.
243. Rice and rice by-products as feeds for laying hens. C. W. Upp. Nov. 1933.
244. Beef cattle production in Louisiana. C. I. Bray. Nov. 1933.
245. Bean investigations. J. C. Miller and W. D. Kimbrough. Dec. 1933.
246. Cotton spacing in southern Louisiana in relation to certain plant characters. J. R. Cotton and H. B. Brown. Mar. 1934.
247. Sugar cane variety report, 1933. C. B. Gouaux and E. C. Simon. Apr. 1934.
248. Sugar cane moth borer control by *Trichogramma minutum* Riley, report on experimental work for 1933. W. E. Hinds, B. A. Osterberger, and A. L. Dugas. May 1934.
249. Feeding grain to beef calves on pasture before weaning. C. I. Bray. June 1934.
250. The rosette disease of blackberries and dewberries. A. G. Plakidas. June 1934.
251. A study of some factors affecting the production and marketing of Louisiana carrots. H. S. Moles, F. D. Cochran, and J. C. Miller. June 1934.
252. Control of strawberry leaf blights in Louisiana. A. G. Plakidas. June 1934. Revision of Bul. 225.
253. Corn and soybean production. H. T. Barr. July 1934.
254. Effect of size of seed piece of Irish potato on recovery from freeze injury. W. D. Kimbrough and David Costa. Sept. 1934.
255. Studies on embryonic lethal characters in the domestic fowl. C. W. Upp. Sept. 1934.
256. Stubble deterioration of sugar cane. C. W. Edgerton, E. C. Tims, and P. J. Mills. Sept. 1934.
257. Machine-dried soybean hay for fattening cattle. M. G. Snell. Aug. 1934.
258. Collards, a truck crop for Louisiana. J. C. Miller. Oct. 1934.
259. Preliminary studies of the length and uniformity of staple of Louisiana cotton varieties. H. B. Brown. Nov. 1934.
260. Louisiana Copenhagen cabbage, methods of breeding and description. J. C. Miller. Nov. 1934.

MAINE AGRICULTURAL EXPERIMENT STATION, ORONO

BULLETINS

364. Prices of farm products in Maine. C. H. Merchant. Mar. 1933.
365. The effect of handling methods on quality of Maine potatoes. W. E. Schrumpf. Apr. 1933.
366. Farm-property taxation in Maine. C. H. Merchant and M. S. Parsons. June 1933.
367. An economic study of the production and utilization of milk in Maine. G. F. Dow. July 1933.
368. Applespraying and dusting experiments 1928 to 1932 in relation to scab, yield, and tree growth. Donald Folsom. Nov. 1933.
369. Summary report of progress, 1933; financial statement for the fiscal year ending June 30, 1933. Fred Griffee [and others]. Dec. 1933.
370. Isolated tuber-unit seed plots for the control of potato virus diseases and blackleg in northern Maine. E. S. Schultz, Reiner Bonde, and W. P. Raleigh. Jan. 1934.
371. A study of factors of economy in electrical cooking of a typical day's meals in Maine. Lolie Smith. July 1934.
372. A survey of the cooking practices in Maine rural and village households. M. M. Monroe. Aug. 1934.
373. An economic study of the collection of milk and cream in Maine. G. F. Dow. Aug. 1934.
374. Costs and returns in operating milk and cream collection routes in Maine. G. F. Dow. Sept. 1934.
375. A study of the causes of nutritional deficiency diseases in the livestock and inhabitants of Maine with possible corrective methods, secured from utilization of Maine fishery products and the production of superior foods. W. F. Dove. Nov. 1934.
376. A primer of electricity and heat. M. M. Monroe. Nov. 1934.
377. Summary report of progress, 1934; financial statement for the fiscal year ending June 30, 1934. Fred Griffee. Dec. 1934.

MARYLAND AGRICULTURAL EXPERIMENT STATION, COLLEGE PARK

BULLETINS

343. Maryland seed laws and regulations. F. S. Holmes. Jan. 1933.
344. Some effects of freezing on the physical and nutritional properties of milk. R. C. Munkwitz, M. H. Berry, and W. C. Boyer. Mar. 1933.
345. Part I, The mosaic disease of tomatoes. J. W. Heuberger and J. B. S. Norton.—Part II, The fusarium wilt of tomatoes. J. B. S. Norton.—Part III, The control of tomato diseases. J. B. S. Norton and H. A. Hunter. Mar. 1933.
346. The sources of the food used by Maryland farmers. Margaret Coffin. Apr. 1933.
347. Oat variety tests. J. E. Metzger. May 1933.
348. Corn earworm studies. L. P. Ditman and E. N. Cory. May 1933.
349. An industrial alcohol by-product stock food. L. B. Broughton, P. W. Frey, and B. E. Carmichael. May 1933.
350. Studies relative to the hydrolysis of the fat of home-cured hams. W. C. Supplee and L. B. Broughton. June 1933.
351. The soils of Maryland, productivity classification. O. C. Bruce and J. E. Metzger. July 1933.
352. Farm tenancy and leasing systems in Maryland. W. P. Walker and S. H. DeVault. July 1933.
353. A study of the factors influencing red color on apples. L. A. Fletcher. July 1933.
354. Use of skimmilk powder, blood flour, and fish meal in grain rations for calves. M. H. Berry. July 1933.
355. An economic study of 147 turkey flocks in Maryland. S. H. DeVault and Mary Ingersoll. Aug. 1933.
356. A farm management study of 70 dairy farms in Montgomery County, Maryland. D. E. Watkins. Sept. 1933.
357. Part-time and small-scale farming in Maryland. W. P. Walker and S. H. DeVault. Oct. 1933.
358. Fertilizer tests with tobacco. J. E. McMurtrey, Jr., W. M. Lunn, and D. E. Brown. Jan. 1934.
359. Feed consumption studies based on the six Maryland egg laying contests. R. H. Waite. Feb. 1934.
360. Cake and biscuit-making qualities of flours from Maryland wheats. W. B. Kemp, G. E. Eppley, and Claribel Welsh. Mar. 1934.
361. Potato seed maintenance. R. A. Jehle and J. W. Heuberger.—Spraying early and late potatoes. R. A. Jehle, E. N. Cory, and R. T. Grant. Mar. 1934.
362. Crop and soil management practices. Apr. 1934.
363. Value of natural weed fallow in the cropping system for tobacco. D. E. Brown and J. E. McMurtrey, Jr. May 1934.
364. The oriental fruit moth in Maryland. H. S. McConnell. June 1934.
365. Roadside markets in Maryland. S. H. DeVault and R. F. Burdette. July 1934.
366. Studies on firmness and keeping quality of certain fruits: I, Effects of nitrogen fertilization. E. S. Degman.—II, Effects of potassium fertilization. J. H. Weinberger. July 1934.
367. A "weigh back" system for feeding laying hens. R. H. Waite. Aug. 1934.
368. Spray residue removal from apples. M. H. Haller, J. H. Beaumont, C. R. Gross, and H. W. Rusk. Sept. 1934.

369. Equine encephalomyelitis. A. L. Brueckner, L. J. Poelma, C. L. Everson, and R. C. Reed. Sept. 1934.
370. A study of the physical and chemical properties of red clover roots in the cold-hardened and unhardened condition. G. A. Greathouse and N. W. Stuart. Nov. 1934.
371. Fruit rotting sclerotinias: IV. A cytological study of *Sclerotinia fruticola* (Wint.) Rehm. J. W. Heubeger. Dec. 1934.

MASSACHUSETTS AGRICULTURAL EXPERIMENT STATION, AMHERST

BULLETINS

293. Annual report for the fiscal year ending November 30, 1932. F. J. Sievers [and others]. Mar. 1933.
294. Recreational and forestry uses of land in Massachusetts. David Rozman. Jan. 1933.
295. The immunology of infectious laryngotracheitis. C. S. Gibbs. May 1933.
296. Effect of manufacturing and preserving processes on the vitamins of cranberries. P. D. Isham and C. R. Fellers. May 1933.
297. The effect of certain cropping systems on the yield and quality of Havana tobacco. A. B. Beaumont, M. E. Snell, and E. B. Holland. June 1933.
298. The significance of length of biological laying year in production breeding. F. A. Hays and Ruby Sanborn. June 1933.
299. Shipping Massachusetts apples to out-of-state markets. A. H. Lindsey and A. A. Brown. Oct. 1933.
300. Chemical composition of herbage from Massachusetts pastures. J. G. Archibald and Emmett Bennett. Oct. 1933.
301. Characteristics of non-broody and intense broody lines of Rhode Island Reds. F. A. Hays. Nov. 1933.
302. Higher aging temperatures in the manufacture of ice cream. W. S. Mueller and J. H. Frandsen. Nov. 1933.
303. Effect of hydrocyanic acid gas on cucumber plants previously sprayed with copper fungicides. E. F. Guba and E. B. Holland. Dec. 1933.
304. Secondary milk markets in Massachusetts in the period of falling prices, 1930-1932. David Rozman. Dec. 1933.
305. Annual report for the fiscal year ending November 30, 1933. F. J. Sievers [and others]. Mar. 1934.
306. Fertilizer tests on an important pasture soil type. A. B. Beaumont. Jan. 1934.
307. Breeding for egg production. F. A. Hays and Ruby Sanborn. Apr. 1934.
308. Preliminary studies on neurolymphomatosis and some more or less related diseases. C. S. Gibbs. May 1934.
309. Soybeans for Massachusetts. A. B. Beaumont and R. E. Stitt. May 1934.
310. Supplementary mid-morning feeding of rural school children. Bernice Wait, Oreana Merriam, and M. V. Cowing. June 1934.
311. Infectious laryngotracheitis vaccination. C. S. Gibbs. July 1934.
312. Effects of inbreeding on fecundity in Rhode Island Reds. F. A. Hays. Oct. 1934.
313. Time interval from first egg to standard egg weight in Rhode Island Red pullets. H. A. Fays. Oct. 1934.
314. Effect of aging treatment on the bacterial count of ice cream mixes. W. S. Mueller and R. L. France. Oct. 1934.

MICHIGAN AGRICULTURAL EXPERIMENT STATION, EAST LANSING

SPECIAL BULLETINS

228. The rock garden. C. P. Halligan. Jan. 1933.
229. Supplement. List of rock garden plants. C. E. Wildon. Jan. 1933.
229. Rural school organization in Michigan. F. M. Thrun. Jan. 1933.
230. Success and failure in spraying for scab and codling moth. G. L. Ricks and Walter Toenjes. Jan. 1933.
231. Agricultural land classification and land types of Michigan. J. O. Veatch. Apr. 1933.
232. The Michigan pear industry, its status and trends. H. P. Gaston. May 1933.
233. Experimental studies in feeding fattening lambs. G. A. Brown. May 1933.
234. Spraying and dusting potatoes in Michigan. H. C. Moore and E. J. Wheeler. May 1933.
235. Motor truck marketing of Michigan livestock. G. N. Motts. May 1933.
236. Population trends in Michigan. J. F. Thaden. June 1933.
237. Trends in cherry production in Michigan. G. N. Motts, C. A. Scholl, and J. W. Chapin. June 1933.
238. Some wood borers attacking the trunks and limbs of deciduous trees and shrubs. E. I. McDaniel. July 1933.
239. The principal grape insects of Michigan. R. H. Pettit. July 1933.
240. Sudan grass as an emergency pasture on light soil. A. B. Dorrance. July 1933.
241. A farm management study of crop production practices. P. G. Minneman and E. B. Hill. Sept. 1933.
242. Grape production costs and returns in southwestern Michigan. N. L. Partridge. Sept. 1933.
243. Important leaf feeding and gall making insects infesting Michigan's deciduous trees and shrubs. E. I. McDaniel. Sept. 1933.

244. Insect pests of stone fruits in Michigan. Ray Hutson. Sept. 1933.
245. Tests show better ways to grow Michigan potatoes. J. J. Bird and H. C. Moore. Dec. 1933.
246. Potato seed treatment tests. E. J. Wheeler and H. C. Moore. Dec. 1933.
247. Recreational use of northern Michigan cut-over lands. W. O. Hedrick. Feb. 1934.
248. Sandy soils, methods of management. G. M. Grantham and C. E. Millar. Aug. 1934.
249. Cabbage varieties. Gordon Morrison, Harm Drewes, and H. N. Coulter. Aug. 1934.
250. Amounts and kinds of feed fed to Michigan dairy cows. E. B. Hill. Sept. 1934.
251. Michigan farm homes. C. H. Jefferson. Sept. 1934.
252. The cultivation of the highbush blueberry. Stanley Johnston. Oct. 1934.
253. Liberal vs. limited rations for draft colts in Michigan. R. S. Hudson. Nov. 1934.
254. Organization of farms in southeastern Michigan. P. G. Minneman and E. B. Hill. Dec. 1934.
255. Sheep investigations and management practices in the Upper Peninsula. L. H. Blakeslee. Jan. 1935.
256. Crop mixture trials in Michigan. R. H. Morrish. Dec. 1934.
257. Utilization of land types for fruit production, Berrien County, Michigan. J. O. Veatch and N. L. Partridge. Dec. 1934.

TECHNICAL BULLETINS

131. The United States export and import trade in dairy products, with special consideration of the tariff. K. H. McDonel. Jan. 1933.
132. Soil testing, a practical system of soil diagnosis. C. H. Spurway. Apr. 1933.
133. Insurance of farm families. I. H. Gross and M. R. Bosworth. June 1933.
134. Phosphorus requirement of dairy cattle when alfalfa furnishes the principal source of protein. C. F. Huffman, C. W. Duncan, C. S. Robinson, and L. W. Lamb. Sept. 1933.
135. The relation of certain soil characteristics to forest growth and composition in the northern hardwood forest of northern Michigan. R. H. Westveld. Sept. 1933.
136. Relation of light intensity to fruit setting in the sour cherry. G. F. Gray. Jan. 1934.
137. The chemical separation of some cellular constituents of the Brucella group of micro-organisms. R. C. Huston, I. F. Huddleson, and A. D. Hershey. May 1934.
138. Study of the changes in basal metabolism produced by drinking chicory and chicory-coffee brews. Marie Dye, S. S. McCosh, Ann Marold, and Charles Robinson. Apr. 1934.
139. Michigan farm prices and costs, 1910-1934. Orion Ulrey. June 1934.
140. Experimental work on cucumber fermentation: VI, Factors influencing the formation of ropy brine in cucumber fermentation; VII, *Eschellus nigrificans* n. sp. as a cause of pickle blackening. F. W. Fabian and A. L. Nienhuis. Aug. 1934.
141. Relation of light, potassium, and calcium deficiencies to photosynthesis, protein synthesis, and translocation. R. P. Hibbard and B. H. Grigsby. Dec. 1934.

MEMOIR

1. Brucellosis, a public health problem. Ward Giltner. Mar. 1934.

QUARTERLY BULLETINS

Quarterly bulletins, vol. 15, no. 3-vol. 17, no. 2. February 1933-November 1934. Each number contains various articles relating to agricultural practice, based on investigational work of the station.

MINNESOTA AGRICULTURAL EXPERIMENT STATION, UNIVERSITY FARM, ST. PAUL

BULLETINS

294. Diseases affecting moose. Reuel Fenstermacher and W. L. Jellison. Jan. 1933.
295. Planning farm organizations for the northeast cut-over section of Minnesota. G. A. Pond and C. W. Crickman. Feb. 1933.
296. Some new facts about molds and bread. Oscar Skovholt and C. H. Bailey. Mar. 1933.
297. Grape growing in Minnesota. W. G. Brierley and W. H. Alderman. Mar. 1933.
298. Mulch paper in vegetable production. A. E. Hutchins. May 1933.
299. Costs of clearing land on Minnesota farms. M. J. Thompson, L. H. Schoenleber, and N. A. Kessler. May 1933.
300. Selection and purchase of feeders and rations for fattening beef cattle. H. W. Peters. Sept. 1933.
301. Beef cattle production in Minnesota. C. W. Crickman, G. A. Sallee, and W. H. Peters. Feb. 1934.
302. Livestock shipping associations in Minnesota. E. C. Johnson and J. B. McNulty. Mar. 1934.
303. Local prices of farm crops in Minnesota. L. F. Garey. Apr. 1934.
304. The cut-over lands of Lake County. Thorvald Schantz-Hansen. Apr. 1934.
305. Raspberry and strawberry production trends in Minnesota. W. H. Alderman, J. D. Winter, and R. W. Cox. Apr. 1934.
306. Feeding methods and rations for fattening lambs. P. S. Jordan and W. H. Peters. May 1934.
307. Farm real estate values in Minnesota. E. C. Johnson. July 1934.
308. Further studies of diseases affecting moose. Reuel Fenstermacher. Sept. 1934.
309. Suggestions to purchasers of farms. W. L. Cavert and G. A. Pond. Sept. 1934.

310. Experiments with the methylene blue reduction test for the grading of sweet cream. Harold Macy. Oct. 1934.
311. A study of the consumption of dairy products in Minneapolis, 1934. W. C. Waite and R. W. Cox. Oct. 1934.
312. Comparative values of farm crops grown at the central and branch stations in yield trials. H. K. Hayes and Carl Borgeson. Dec. 1934.
313. Dry skimmilk, how to use it. A. M. Child. Dec. 1934.
314. Factors causing variations in earnings among dairy farmers in southeastern Minnesota. G. A. Pond, W. P. Ranney, and C. W. Crickman. Dec. 1934.

TECHNICAL BULLETINS

90. Preliminary report on some Minnesota lakes and their productiveness of fish food. M. S. Johnson. Mar. 1933.
91. Phosphorus deficiency in the rations of cattle. C. H. Eckles, T. W. Gullickson, and L. S. Palmer. Aug. 1932.
92. Fundamental food requirements for the growth of the rat: VII, An experimental study of inheritance as a factor influencing food utilization in the rat. H. P. Morris, L. S. Palmer, and Cornelia Kennedy. Feb. 1933.
93. Investigations in the control of the cyclamen mite (*Tarsonemus pallidus* Banks). Francis Munger. May 1933.
94. Efficiency variations in steers, a proposed record of performance. L. M. Winters and Harry McMahon. Dec. 1933.
95. Physiologic specialization and variation in *Helminthosporium gramineum* Rab. J. J. Christensen and T. W. Graham. Apr. 1934.
96. Morphological relationships in the ontogeny of the cultivated cucumber, *Cucumis sativus* L. A. E. Hutchins. Apr. 1934.
97. The microbiology of cheese-like flavors in unsalted butter. E. O. Herreid, Harold Macy, and W. B. Combs. May 1934.
98. Studies on the taxonomy, morphology, and biology of *Prosthogonimus macrorchis* Macy, a common oviduct fluke of domestic fowls in North America. R. W. Macy. June 1934.
99. The composition, quantity, and physiological significance of gases in tree stems. W. W. Chase. May 1934.
100. Studies of the response of the Latham raspberry to pruning treatment. W. G. Brierley. Sept. 1934.
101. Proper spacing and depth of tile drains determined by the physical properties of the soil. J. H. Neal. June 1934.
102. Correlated inheritance in oats of reaction to diseases and other characters. D. C. Smith. July 1934.
103. The relationship between certain morphological characters and lodging in corn. D. M. Hall. Aug. 1934.

MISSISSIPPI AGRICULTURAL EXPERIMENT STATION, STATE COLLEGE

BULLETINS

300. Grade, staple and variety of Mississippi cotton, crops of 1923-1932. L. E. Long. July 1933.
301. Varying amounts of cottonseed hulls and sorghum silage for finishing mature steers. R. H. Means. Nov. 1933.
302. Report from Holly Springs branch experiment station for 1933. C. T. Ames. Dec. 1933.
303. A compilation of experimental and other data on winter legumes. Aug. 1934.

TECHNICAL BULLETINS

20. Effects of varying amounts of potash on oil and protein and on the weight and percentage of cotton seed. J. F. O'Kelly, W. W. Hull, and Marvin Gieger. Mar. 1933.
21. Farm prices of cotton related to its grade and staple length in selected local markets in Mississippi, seasons, 1923-29, 1929-30, 1930-31. L. D. Howell [and others]. Mar. 1933.

MISSOURI AGRICULTURAL EXPERIMENT STATION, COLUMBIA

BULLETINS

320. The sorghum worm in Missouri. Leonard Haseman. Jan. 1933.
321. Registration, labeling, inspection, and sale of commercial fertilizers, 1932. F. B. Mumford and L. D. Haigh. Mar. 1933.
322. Inoculation of legumes. W. A. Albrecht. Mar. 1933.
323. Proceedings of the First Missouri conference on land utilization, University of Missouri college of agriculture, February 23 and 24, 1933. Edited by C. H. Hammar and H. H. Krusekopf. Apr. 1933.
324. Soil fertility losses under Missouri conditions. Hans Jenny. May 1933.

325. Wheat as a cattle feed. E. A. Trowbridge and H. C. Moffett. June 1933.
326. Better methods for growing alfalfa. W. C. Etheridge and C. A. Helm. July 1933.
327. Investigations in the use of nitrate of soda for field crops. M. F. Miller and R. L. Lovvorn. July 1933.
328. Work of the agricultural experiment station: The report of the director for the year ending June 30, 1932. F. B. Mumford and S. B. Shirky. July 1933.
329. Consumer preferences for egg yolk color and shell color in New York City. F. L. Thomsen and Berley Winton. Aug. 1933.
330. The feeding of livestock. A. G. Hogan. Dec. 1933.
331. *Lepedeza sericea*, the newest legume for Missouri. C. A. Helm and W. C. Etheridge. Dec. 1933.
332. Egg weight in the domestic fowl. E. M. Funk and H. L. Kempster. Feb. 1934.
333. Registration, labeling, and inspection of commercial fertilizers, 1933. F. B. Mumford [and others]. Mar. 1934.
334. The codling moth problem in Missouri. Leonard Haseman. Apr. 1934.
335. The use of lard in cookery. J. A. Cline. Apr. 1934.
336. Growth standards for dairy cattle. A. C. Ragsdale. May 1934.
337. The feed purchasing power of a hen's egg production. H. L. Kempster. June 1934.
338. Feed consumption of dairy cattle during growth. A. C. Ragsdale. June 1934.
339. The causes of the growth and function of the udder of cattle. C. W. Turner. July 1934.
340. Work of the agricultural experiment station: The report of the director for the year ending June 30, 1933. F. B. Mumford and S. B. Shirky. Sept. 1934.
341. Factors influencing hatchability in the domestic fowl. E. M. Funk. Oct. 1934.
342. Greenhouse pests and their control. Leonard Haseman and E. T. Jones. Nov. 1934.

RESEARCH BULLETINS

180. Growth and development, with special reference to domestic animals: XXVI, The energy increment of standing over lying and the cost of getting up and lying down in growing ruminants (cattle and sheep); comparison of pulse rate, respiration rate, tidal air, and minute volume of pulmonary ventilation during lying and standing. W. C. Hall and Samuel Brody. Jan. 1933.
181. Sandiness in nut ice creams. W. H. E. Reid and M. E. Powell. Feb. 1933.
182. The normal development of the mammary gland of the male and female albino mouse. C. W. Turner and E. T. Gomez. Feb. 1933.
183. Some results from feeding spray chemicals to albino rats. T. J. Talbert and W. L. Tayloe. Mar. 1933.
184. The distribution of the genus *Phytophthora*. C. M. Tucker. Mar. 1933.
185. The freezing properties, stability, and physical qualities of chocolate ice cream. W. H. E. Reid and W. E. Painter. Mar. 1933.
186. The effects of management and sex on carcasses of yearling cattle. M. T. Foster and J. C. Miller. Apr. 1933.
187. The relation of dry skim milk to the physical and chemical properties of cottage cheese. W. H. E. Reid and C. L. Fleshman. Apr. 1933.
188. The population of Missouri, a general survey of its sources, changes, and present composition. H. J. Burt. May 1933.
189. Growth and development, with special reference to domestic animals: XXVII, Endogenous urinary nitrogen and total creatinine excretion in rats as functions of dietary protein level, time on N-free diets, age, body weight, and basal metabolism. U. S. Ashworth and Samuel Brody. June 1933.
190. Growth and development, with special reference to domestic animals: XXVIII, Decline of endogenous nitrogen excretion per unit weight with increasing weight in growing rats, and its relation to the decline in basal metabolism; decline in live weight, nitrogen, and energy metabolism with the advance of the period of nitrogen starvation and the influence of live weight and of preceding level of protein intake on these declines and on the survival periods. U. S. Ashworth and Samuel Brody. June 1933.
191. Growth and development, with special reference to domestic animals: XXIX, Age curves of creatinine and urinary nitrogen coefficients in dairy cattle, and their relations to energy metabolism. U. S. Ashworth and Samuel Brody. June 1933.
192. Growth and development, with special reference to domestic animals: XXX, The partition of digestible nitrogen intake between growth, milk secretion, and urinary excretion in growing dairy cattle. Samuel Brody and A. C. Ragsdale. June 1933.
193. Growth and development, with special reference to domestic animals: XXXI, Influence of the plane of nutrition on the utilizability of feeding stuffs; review of literature and graphic analyses of published data on the net-energy and specific dynamic action problems. Samuel Brody and R. C. Procter. June 1933.
194. The normal development of the mammary gland of the male and female guinea pig. C. W. Turner and E. T. Gomez. June 1933.

195. Effects of variations in the amounts of vitamin B and protein in the ration. A. G. Hogan and R. W. Pilcher. June 1933.
196. The function, assay and preparation of galactin, a lactation stimulating hormone of the anterior pituitary and an investigation of the factors responsible for the control of normal lactation. W. U. Gardner and C. W. Turner. June 1933.
197. Power, labor and machine costs in crop production, Linn County, Missouri, 1930. D. D. Smith and M. M. Jones. June 1933.
198. The nutritional requirements of the chick. A. G. Hogan and R. V. Boucher. June 1933.
199. Rural community trends, second report. H. J. Burt. June 1933.
200. Histological differences in the muscles of full, half and rough fed steers. D. D. Robertson and D. D. Baker. July 1933.
201. The nature of shedding of immature apples. A. E. Murneek. Aug. 1933.
202. Are we developing strains of codling moths resistant to arsenic? Leonard Haseman and R. L. Meffert. Aug. 1933.
203. The Missouri farm real estate situation for 1931-1932. C. H. Hammar and R. K. Moore. Sept. 1933.
204. On the genetic nature of induced mutations in plants: II, A haplo-viable deficiency in maize. L. J. Stadler. Nov. 1933.
205. The vitamins A and D activity of egg yolks of different color concentrations. Bertha Bisbey, Virginia Appleby, Adelia Weis, and Sylvia Cover. Jan. 1934.
206. The experimental development of the mammary gland: I, The male and female albino mouse; II, the male and female guinea pig. C. W. Turner and E. T. Gomez. Apr. 1934.
207. The normal and experimental development of the mammary gland: I, The male and female domestic cat. C. W. Turner and W. R. DeMoss.—II, The male and female dog. C. W. Turner and E. T. Gomez. May 1934.
208. Growth and development, with special reference to domestic animals: XXXII, The energy cost of horizontal walking in cattle and horses of various ages and body weights. W. C. Hall and Samuel Brody. May 1934.
209. Growth and development, with special reference to domestic animals: XXXIII, Efficiency of work horses of different ages and body weights. R. C. Procter, Samuel Brody, M. M. Jones, and D. W. Chittenden. May 1934.
210. Experimental studies on the development of heavy claypans in soils. G. D. Smith. June 1934.
211. The functional individuality of the mammary glands of the udder of the dairy cow. C. W. Turner. June 1934.
212. The physico-chemical properties of soils affecting soil erosion. J. F. Lutz. July 1934.
213. The relation of dry skim milk to several of the physical and chemical properties of cream cheese. W. H. E. Reid and H. R. Alley. July 1934.
214. The relation of dry skim milk to several of the physical and chemical properties of whipped cream. W. H. E. Reid and W. C. Eckles. July 1934.
215. The relation of the freezing procedure and the composition of the mixture to the physical and crystalline structure of ice cream. W. H. E. Reid and M. W. Hales. July 1934.
216. Disturbances in the natural oxidation-reduction equilibrium of milk with special reference to the use of the dehydrated milks in the manufacture of cottage cheese. W. H. E. Reid and R. L. Brock. July 1934.
217. The thermo-regulatory function and mechanism of the scrotum. R. W. Phillips and F. F. McKenzie. July 1934.
218. Farm building studies in northwest Missouri. J. C. Wooley. Aug. 1934.
219. Nutritional requirements of rabbits and guinea pigs. A. G. Hogan and W. S. Ritchie. Aug. 1934.
220. Growth and development, with special reference to domestic animals: XXXIV, Basal metabolism, endogenous nitrogen, creatinine and neutral sulphur excretions as functions of body weight. Samuel Brody, R. C. Procter, and U. S. Ashworth. Oct. 1934.

MONTANA AGRICULTURAL EXPERIMENT STATION, BOZEMAN

BULLETINS

270. Eight years' work by the Montana grain inspection laboratory, July 1, 1923, to June 30, 1931. Clyde McKee, W. O. Whitcomb, W. D. Hay, and D. M. Feese. Jan. 1933.
271. The use of time by rural homemakers in Montana. J. E. Richardson. Feb. 1933.
272. The flaxseed market and the tariff. R. R. Renne. Feb. 1933.
273. Soils of Toole and Liberty Counties, soil reconnaissance of Montana, preliminary report. L. F. Gieseke. Apr. 1933.
274. Soils of Glacier County, soil reconnaissance of Montana, preliminary report. L. F. Gieseke. Apr. 1933.
275. Maintenance of beef cows for calf production. Louis Vinke and W. F. Dickson. Apr. 1933.
276. The effect of storage and canning upon the vitamin content of carrots. D. D. Langley, J. E. Richardson, and E. J. Andes. May 1933.

277. The effect of storage on the palatability and vitamin content of rutabagas. J. E. Richardson and H. L. Mayfield. May 1933.
278. Farm organization as affected by mechanization. E. A. Starch. May 1933.
279. A comparison of irrigated and non-irrigated seed potatoes. F. M. Harrington. May 1933.
280. Experiments with phosphate fertilizers on Montana soils. Edmund Burke, I. J. Nygard, and W. McK. Martin. July 1933.
281. A dike-ridger. H. E. Murdock. Oct. 1933.
282. Feeds for dairy cattle. J. O. Tretsvén. Dec. 1933.
283. Composition of Montana feeds and forages. Jesse Green. Jan. 1934.
284. Small grains and supplements for fattening fall pigs. Louis Vinke and Barton Bergstedt. Jan. 1934.
285. Experimental studies of foot-rot in sheep. Hadleigh Marsh and E. A. Tunnickliff. Feb. 1934.
286. Montana farm taxes. R. R. Renne and B. W. Allin. Mar. 1934.
287. Types of farming in southeastern Montana, based on studies made in 1926 and 1929. V. D. Gilman. Apr. 1934.
288. The mosquitoes of Montana. G. A. Mail. Mar. 1934.
289. Diesel power and field operating costs. May 1934.
290. An analysis of agriculture on the Milk River irrigation project. P. L. Slagsvold and G. H. Bingham. June 1934.
291. Soils of Pondera County, soil reconnaissance of Montana, preliminary report. L. F. Gieseke. June 1934.
292. The premature seeding of celery, a second report. C. C. Starring. June 1934.
293. Feeding dairy cows with and without grain. W. F. Dickson and D. V. Kopland. Oct. 1934.
294. Montana insect pests for 1933 and 1934, the twenty-fifth report of the state entomologist of Montana. A. L. Strand. Dec. 1934.

NEBRASKA AGRICULTURAL EXPERIMENT STATION, LINCOLN

BULLETINS

277. Nebraska tractor tests, 1920-1932. Jan. 1933.
278. Soil management experiments with vegetables. H. O. Werner. Jan. 1933.
279. (North Platte experiment substation Bul. 34.) Dry land crop production at the North Platte experimental substation. L. L. Zook. Feb. 1933.
280. Turkey production. F. E. Mussehl. Apr. 1933.
281. (North Platte experiment substation Bul. 35.) Fattening yearling heifers on alfalfa pasture. M. L. Baker. May 1933.
282. Pump irrigation investigations in Nebraska. E. E. Brackett and E. B. Lewis. July 1933.
283. Winter wheat varieties in Nebraska. T. A. Kiesselbach, Arthur Anderson, and C. A. Suneson. July 1933.
284. Local prices of farm products in Nebraska, 1895-1932. H. C. Filley and A. M. Hauke. July 1933.
285. Nebraska tractor tests, 1920-1933. Jan. 1934.
286. Cultural practices in winter wheat production. T. A. Kiesselbach, Arthur Anderson, and W. E. Lyness. Apr. 1934.
287. Bindweeds and their control. T. A. Kiesselbach, N. F. Petersen, and W. W. Burr. May 1934.
288. Common grass weeds of Nebraska. F. D. Keim and A. L. Frolik. June 1934.
289. Use of electricity on Nebraska farms, 1930-1934. E. E. Brackett and E. B. Lewis. June 1934.
290. Diseases of poultry, their nature and control. Leunis Van Es and J. F. Olney. July 1934.
291. A comparative study of pneumatic tires and steel wheels on farm tractors. C. W. Smith and L. W. Hurlbut. Sept. 1934.

RESEARCH BULLETINS

66. The relative susceptibility of alfalfas to wilt. G. L. Peltier. Apr. 1933.
67. Farm mortgage history of eleven southeastern Nebraska townships, 1870-1932. E. H. Hinman and J. O. Rankin. Aug. 1933.
68. A study of five commercial electric stoves. A. E. Baragar and E. B. Snyder. Oct. 1933.
69. The vitamin A content of skim milk, standardized milk, and cream from different breeds of cows. I. L. Hathaway and H. P. Davis. Dec. 1933.
70. Cephalosporium wilt and die-back of the white elm. R. W. Goss and P. R. Frink. Jan. 1934.
71. Effects of inflation and deflation upon Nebraska agriculture, 1914 to 1932. H. C. Filley. June 1934.
72. History of farm land prices in eleven Nebraska counties, 1873-1933. E. H. Hinman. June 1934.
73. The vitamin E content of certain dairy feeds. I. L. Hathaway and H. P. Davis. Aug. 1934.
74. Some observations on humidity and weight loss in the incubation of turkey eggs. F. E. Mussehl and C. W. Ackerson. Aug. 1934.
75. The effect of a controlled nitrogen supply with different temperatures and photoperiods upon the development of the potato plant. H. O. Werner. Sept. 1934.
76. Wilt and cold resistance of self-fertilized lines of alfalfas. G. L. Peltier and H. M. Tysdal. Sept. 1934.

NEVADA AGRICULTURAL EXPERIMENT STATION, RENO

BULLETINS

130. Production of crops and livestock on the Newlands project in 1932. F. B. Headley and Cruz Venstrom. Apr. 1933.
131. Effect of season on fat test and milk production of dairy cows. F. B. Headley. Aug. 1933.
132. Equine encephalomyelitis. Edward Records, L. R. Vawter, F. H. Baker, and G. T. Woodward. June 1933.
133. The main reasons why range cattle ranchers succeed or fail: Cattle production costs per head and pound, 1928 to 1932 figures and long-time averages. C. A. Brennen, C. E. Fleming, G. H. Smith, Jr., and M. R. Bruce. Sept. 1933.
134. Production of crops and livestock on the Newlands project in 1933. F. B. Headley and Cruz Venstrom. Apr. 1934.
135. Grub in the head in sheep in northeastern Nevada, methods of herding which favored injury and methods of range management which practically eliminate losses. Robert Dill. Apr. 1934.
136. The quality of the waters of southeastern Nevada, drainage basins and water resources. George Hardman and M. R. Miller. July 1934.

NEW HAMPSHIRE AGRICULTURAL EXPERIMENT STATION, DURHAM

BULLETINS

270. Agricultural research in New Hampshire: Annual report of the director of the New Hampshire agricultural experiment station for the year 1932. J. C. Kendall. Mar. 1933.
271. Fertilizer experiments on "run-out" hayland. F. S. Prince, P. T. Blood, T. G. Phillips, and G. P. Percival. Apr. 1933.
272. Retailing milk in Laconia. E. H. Rinear and H. C. Moore. June 1933.
273. Roughage production in New Hampshire, an economic study. M. F. Abell. July 1933.
274. Pollination and fruit setting in the apple. L. P. Latimer. June 1933.
275. Efficiency studies in dairy farming. H. C. Woodworth, C. W. Harris, Jr., and Emil Rauchenstein. May 1933.
276. Results of seed tests for 1933, made for the State department of agriculture. B. G. Sanborn and L. J. Higgins. Aug. 1933.
277. Inspection of commercial feeding stuffs, 1933, made for the State department of agriculture. T. O. Smith and H. A. Davis. July 1933.
278. Inspection of commercial fertilizers for 1933, made for the State department of agriculture. T. O. Smith and H. A. Davis. Dec. 1933.
279. Studies in economics of apple orcharding: Part II, A study of farm organization on 12 fruit farms. H. C. Woodworth and G. F. Potter. Mar. 1934.
280. Agricultural research in New Hampshire: Annual report of the director of the New Hampshire agricultural experiment station for the year 1933. J. C. Kendall. Mar. 1934.
281. Inspection of commercial feeding stuffs, 1934, made for the State department of agriculture. T. O. Smith and H. A. Davis. July 1934.
282. Results of seed tests for 1934, made for the State department of agriculture. B. G. Sanborn and L. J. Higgins. Aug. 1934.
283. Inspection of commercial fertilizers for 1934, made for the State department of agriculture. T. O. Smith and H. A. Davis. Dec. 1934.

TECHNICAL BULLETINS

53. The multinipple trait in sheep and its inheritance, a proposed genetic analysis. E. G. Ritzman. June 1933.
54. Studies of contact insecticides: VI, 1, Reactions of certain insects to controlled applications of various concentrated chemicals; 2, a new technique for initial appraisal of proposed contact insecticides, W. C. O'Kane, G. L. Walker, H. G. Guy, and O. J. Smith. June 1933.
55. Fertilizer experiments on strawberries, with a presentation of statistical methods for calculating the significance of plot yields. L. P. Latimer and S. W. Wentworth. June 1933.
56. Burgundy mixture. O. R. Butler. Sept. 1933.
57. Significance of colon organisms in raw milk. H. C. Moore and J. M. Fuller. June 1934.
58. Studies of contact insecticides: VII, 1, Methods of expressing toxicity; 2, toxicity of nicotine, heptylic acid and caproic acid to mosquito larvae, *Culex pipiens* L. W. C. O'Kane, W. A. Westgate, and L. C. Glover. June 1934.
59. The effect of potassium deficiency on the composition of the tomato plant. T. G. Phillips, T. O. Smith, and R. B. Dearborn. June 1934.
60. Studies of contact insecticides: VIII, 1, A technique for tracing penetration of petroleum oil in insect eggs; 2, some determinations of oil penetration into insect eggs. W. C. O'Kane and W. C. Baker. June 1934.

NEW JERSEY AGRICULTURAL EXPERIMENT STATION, NEW BRUNSWICK

BULLETINS

550. Results of seed and legume inoculant inspection for 1932. J. G. Fiske. Jan. 1933.
551. Analyses of commercial fertilizers and ground bone; analyses of agricultural lime, 1932. C. S. Cathcart. Jan. 1933.
552. Proceedings of the New Jersey land use conference, held at New Brunswick, New Jersey, December 21, 1932. Jan. 1933.
553. Attracting winter birds to the garden and home grounds. L. A. Hausman. June 1933.
554. Analyses of commercial feeding stuffs and registrations for 1933. C. S. Cathcart. June 1933.
555. Facts on fruit and vegetable farming in New Jersey, 1926-1931. A. G. Waller and J. W. Carncross. June 1933.
556. Analyses of materials sold as insecticides and fungicides during 1933. C. S. Cathcart and R. L. Willis. Oct. 1933.
557. Analyses of commercial fertilizers, fertilizer supplies, and home mixtures for 1933. C. S. Cathcart. Nov. 1933.
558. Fertilizer and tillage for blueberries. C. S. Beckwith and C. A. Doehlert. Nov. 1933.
559. The New Jersey standard for judging the growth status of the Delicious apple. M. A. Blake and O. W. Davidson. Feb. 1934.
560. The effect of the curing process upon the carotene and vitamin A content of alfalfa. W. C. Russell, M. W. Taylor, and D. F. Chichester. Jan. 1934.
561. Analyses of commercial fertilizers and ground bone; analyses of agricultural lime, 1933. C. S. Cathcart. Jan. 1934.
562. Summary of results of seed and legume inoculant inspection for 1933. J. G. Fiske. Jan. 1934.
563. The effect of nitrogenous fertilization on the protein content of corn when harvested for silage. C. B. Bender and A. L. Prince. Feb. 1934.
564. Five years' results on pasture fertilization and rotation management. C. B. Bender. Apr. 1934.
565. Improving pastures in New Jersey. H. B. Sprague, N. F. Farris, and C. S. Cathcart. Apr. 1934.
566. Effects of temperature on the growth and composition of Stayman and Baldwin apple trees. G. T. Nightingale and M. A. Blake. Apr. 1934.
567. Effects of temperature on the growth and metabolism of Elberta peach trees, with notes on the growth responses of other varieties. G. T. Nightingale and M. A. Blake. Apr. 1934.
568. Some observations on the effect of radio waves on insects and plant hosts. T. J. Headlee. Apr. 1934.
569. The principal soils of New Jersey and their utilization for agriculture. L. L. Lee. June 1934.
570. Utilization of nutrients by Colonial bent (*Agrostis tenuis*) and Kentucky bluegrass (*Poa pratensis*). H. B. Sprague. May 1934.
571. A study of the effect of certain ammonium compounds on the soil and on the crop. A. L. Prince and A. W. Blair. June 1934.
572. The inheritance of high butterfat percentage in Holstein-Friesian cattle, an analysis of the progeny performance of sires mated to 4 per cent dams. J. W. Bartlett, K. O. Pfau, and H. H. Tucker. June 1934.
573. Analyses of commercial feeding stuffs and registrations for 1934. C. S. Cathcart. June 1934.
574. Control of dewberry anthracnose by spraying. C. M. Haenseler. June 1934.
575. New York market prices of certain New Jersey vegetables, 1910-1933. A. G. Waller and J. W. Carncross. June 1934.
576. Derris insecticides: I, Toxicity of various extracts of derris root to sucking and chewing insects. J. M. Ginsburg, J. B. Schmitt, and Philip Granett.—II, Insecticidal properties of extracted derris root residue. J. M. Ginsburg and Philip Granett. Apr. 1934.
577. Analyses of materials sold as insecticides and fungicides during 1934. C. S. Cathcart and R. L. Willis. Oct. 1934.
578. Analyses of commercial fertilizers, fertilizer supplies, and home mixtures for 1934. C. S. Cathcart. Nov. 1934.
579. Cycles of abundance of the eastern tent caterpillar (*Malacosoma americana* Fabr.). T. J. Headlee. Nov. 1934.
580. The sparrows of New Jersey. L. A. Hausman. Jan. 1935.
581. Derris insecticides: III, Aphicidal properties of derris and cube root. J. M. Ginsburg and Philip Granett. Feb. 1935.
582. Analyses of commercial fertilizers and ground bone; analyses of agricultural lime, 1934. C. S. Cathcart. Dec. 1934.

NEW MEXICO AGRICULTURAL EXPERIMENT STATION, STATE COLLEGE

BULLETINS

207. Methods of producing sugar-beet seed in southern New Mexico. H. A. Elcock and J. C. Overpeck. Feb. 1933.
208. Turkey raising under conditions of semi-confinement. L. N. Berry. Feb. 1933.

209. Orchard management, with notes on varieties. A. B. Fite. May 1933.
210. (Technical.) The effects of acidifying amendments on impermeable soils. C. W. Botkin. May 1933.
211. Steer fattening rations built largely around ground corn fodder and silage with cottonseed meal and molasses as added concentrates. J. L. Lantow. May 1933.
212. (Technical.) Digestion and mineral balance trials on range cattle with native New Mexico range hay, cottonseed meal, and mineral supplements. W. E. Watkins. June 1933.
213. Chemical compositions of New Mexico pinto and bayo beans. M. L. Greenwood. June 1933.
214. The assimilations of calcium and phosphorus from different mineral compounds and their effect on range cattle. J. L. Lantow. June 1933.
215. Farm organization practices and costs of producing crops in the Middle Rio Grande Conservancy District of New Mexico. A. L. Walker and P. W. Cockerill. June 1933.
216. Reduction of chile wilt by cultural methods. Fabian Garcia. Dec. 1933.
217. Cotton breeding investigations, 1928 to 1932. G. N. Stroman. Jan. 1934.
218. Results of Irish potato experiments in the Bluewater, New Mexico, irrigation district. Fabian Garcia and S. C. Young. Jan. 1934.
219. Cotton spacing experiments in the Mesilla Valley, New Mexico. A. R. Leding and L. R. Lytton. Mar. 1934.
220. Results of irrigation treatments on Acala cotton grown in the Mesilla Valley, New Mexico. A. S. Curry. Mar. 1934.
221. A comparison of the nutritive values of cottonseed meal, alfalfa leaf meal, and meat and bone scraps in a ration for growing chicks. L. N. Berry. Mar. 1934.
222. A feeding comparison of ground corn fodder, corn silage, and ground hegari fodder for fattening lambs. P. E. Neale. Apr. 1934.
223. (Technical.) The etiology and control of chile wilt, produced by *Fusarium annuum*. R. F. Crawford. June 1934.
224. Factors affecting the market qualities of New Mexico eggs. A. L. Walker, L. N. Berry, and P. W. Cockerill. June 1934.
225. Quality of cotton produced in New Mexico, 1928-1932. J. R. Kennedy and J. C. Overpeck. July 1934.
226. Cottonseed meal as the principal source of protein for dairy animals. O. C. Cunningham and L. H. Addington. Sept. 1934.
227. Emergency feeding of livestock. J. L. Lantow and O. C. Cunningham. Aug. 1934.

NEW YORK (CORNELL) AGRICULTURAL EXPERIMENT STATION, ITHACA

BULLETINS

551. Economic studies of dairy farming in New York: X, 141 farms in the Tully-Homer area, crop year 1926. E. G. Misner. Jan. 1933.
552. The effect of certain mineral elements on the color and thickness of onion scales. J. E. Knott. Jan. 1933.
553. Studies of potato storage. Ora Smith. Mar. 1933.
554. Cost accounts on New York farms. J. F. Harriott and L. M. Vaughan. Apr. 1933.
555. Relation of community areas to town government in the State of New York. C. R. Wasson and Dwight Sanderson. Apr. 1933.
556. Freezing injury to the roots and crowns of apple trees. H. E. Thomas and L. H. MacDaniels. Apr. 1933.
557. Fire blight of pear and apple. H. E. Thomas and K. G. Parker. Apr. 1933.
558. Ventilation of poultry houses for laying and breeding hens. J. C. Huttar, F. L. Fairbanks, and H. E. Botsford. May 1933.
559. Social and economic areas of Broome County, New York, 1928. Dwight Sanderson. May 1933.
560. The income, savings, and work of boys and girls on farms in New York, 1930. H. W. Beers. May 1933.
561. Buying for the household as practiced by 368 farm families in New York, 1928-29. Marion Fish. June 1933.
562. Economic studies of dairy farming in New York: XI, Success in management of dairy farms as affected by the proportion of the factors of production. P. H. Stephens. June 1933.
563. A study of the food habits and health of farm families in Tompkins County, New York. N. B. Morey. June 1933.
564. Lettuce production on the muck soils of New York. J. E. Knott. June 1933.
565. Costs and returns in producing apples in the Newfane-Olcott area, Niagara County, New York, 1926 to 1928. T. E. La Mont. June 1933.
566. Copper seed treatments for the control of damping-off of spinach. P. P. Pirone [and others]. June 1933.
567. The soils and crop production in Genesee County, New York: Part I, Soils and field crops. A. F. Gustafson.—Part II, Pastures. D. B. Johnstone-Wallace.—Part III, Vegetable crops. F. O. Underwood.—Part IV, Fruit growing. Joseph Oskamp. June 1933.
568. Costs and returns in producing potatoes in New York in 1929. F. L. Underwood. June 1933.

569. Insects and other injuries to potato tubers. G. F. MacLeod and W. A. Rawlins. June 1933.
570. Soil and field-crop management for St. Lawrence County, New York: Part I, Soils and field crops. A. F. Gustafson.—Part II, Pasture improvement and management. D. B. Johnstone-Wallace.—Part III, Soil map and soil-type descriptions. F. B. Howe and A. F. Gustafson. June 1933.
571. Studies in plant propagation: The influence of chemicals, of the medium, and of the position of the basal cut, on the rooting of evergreen and deciduous cuttings. L. C. Chadwick. June 1933.
572. Correcting the unproductiveness of acid and alkaline muck soils for the growing of vegetable crops. G. M. Tait and J. E. Knott. June 1933.
573. Nut growing in New York State. L. H. MacDaniels. June 1933.
574. A test of floats as fertilizer and a study of the influence of farm manure on their effectiveness. T. L. Lyon. June 1933.
575. Soils in relation to fruit growing in New York: Part III, Some physical and chemical properties of the soils of the Hilton and Morton areas, Monroe County, and their relation to orchard performance. Joseph Oskamp and L. P. Batjer. July 1933.
576. The Cornell University dairy herd, 1889 to 1928. H. H. Wing. Aug. 1933.
577. The rate of photosynthesis of apple leaves under natural conditions, Part I. A. J. Heinicke and M. B. Hoffman. Nov. 1933.
578. The effect of different planes of protein intake upon milk production: II, Further comparisons of 16-, 20-, and 24-per-cent mixtures. E. S. Harrison, E. S. Savage, and S. H. Work. Nov. 1933.
579. The diagnosis and control of mastitis. D. H. Udall and S. D. Johnson. Dec. 1933.
580. Pruning and training tomatoes. H. C. Thompson. Jan. 1934.
581. Factors influencing the occurrence of potato scab in New York. F. M. Blodgett and F. B. Howe. Feb. 1934.
582. Relation of cities and larger villages to changes in rural trade and social areas in Wayne County, New York. H. C. Hoffsommer. Feb. 1934.
583. The relationship of the open-country population of Genesee County, New York, to villages and cities. E. A. Taylor. Feb. 1934.
584. Relationships of open-country families of Onondaga County, New York, to socio-economic areas, villages, and cities. A. M. Paxson. Feb. 1934.
585. An economic study of the marketing of certain perishable farm products in Albany, New York. W. C. Hopper. Feb. 1934.
586. Consumption of certain perishable farm products in Albany, New York. W. C. Hopper. Mar. 1934.
587. The rural churches of Alleghany County. W. G. Mather, Jr. Mar. 1934.
588. History, culture, and varieties of summer-flowering phloxes. A. M. S. Pridham. Mar. 1934.
589. A study of the effect of removing foremilk on the fat content of the remainder of the milking. H. E. Ross and Helmuth Winther. Mar. 1934.
590. An economic study of land utilization in Tompkins County, New York. A. B. Lewis. Apr. 1934.
591. Movement of population to and from New York State. W. A. Anderson. Apr. 1934.
592. Soils in relation to fruit growing in New York: Part IV, The significance of the oxidation-reduction potential in evaluating soils for orchard purposes. Richard Bradfield, L. P. Batjer, and Joseph Oskamp. Apr. 1934.
593. II, Further studies of the influence of different levels of fat intake upon milk secretion. L. A. Maynard, C. M. McCay, H. H. Williams, and L. L. Madsen. Apr. 1934.
594. Production of early blooms of chrysanthemums by the use of black cloth to reduce the length of day. Kenneth Post. Apr. 1934.
595. The rural homes of city workers and the urban-rural migration. L. B. Tate. Apr. 1934.
596. Interrelationships of daily prices and supply in the New York egg market. Karl Vogt. Apr. 1934.
597. Relation of quality to the retail price of eggs in New York City. A. R. Gans. Apr. 1934.
598. Governmental costs and taxes in some rural New York towns. H. M. Haag. May 1934.
599. Studies of the effects of handling methods on the quality of market peas. F. S. Jamison. May 1934.
600. Soil, field-crop, and pasture management for Suffolk and Nassau Counties, New York: Part I, Soil and field-crop management. A. F. Gustafson.—Part II, Pasture improvement and management. D. B. Johnstone-Wallace.—Part III, Soil map and soil-type descriptions. F. B. Howe and A. F. Gustafson. May 1934.
601. Cayuga soybean, a home-grown, high-oil high-protein concentrate. R. G. Wiggans. May 1934.
602. Studies on cold storage of vegetables. Hans Platenius, F. S. Jamison, and H. C. Thompson. May 1934.
603. An investigation of the cause of the stiff-lamb disease. J. P. Willman, S. A. Asdell, and Peter Olafson. May 1934.
604. Removal of lead and arsenic spray residues from New York apples. W. T. Pentzer. May 1934.
605. An economic study of grape farms in eastern United States: Part I, Production. G. P. Scoville. May 1934.
606. The cow as a source of "oxidized" flavors of milk. E. S. Guthrie and H. J. Brueckner. May 1934.
607. Mobility of rural families: I, Changes in residence and in occupation of rural husbands and wives in Genesee County, New York. W. A. Anderson. June 1934.
608. A study of rural community development in Waterville, New York. W. G. Mather, Jr., T. H. Townsend, and Dwight Sanderson. June 1934.

609. Soils in relation to fruit growing in New York: Part V, The vineyard soils of the Westfield area, Chautauqua County. Joseph Oskamp. June 1934.
610. A study of practices in feeding infants, results of a survey of 657 babies in villages of New York State, 1930. R. S. Biral. June 1934.
611. Vegetable-crop production in Suffolk and Nassau Counties. F. O. Underwood. June 1934.
612. Soil, field-crop, and pasture management for Herkimer County, New York: Part I, Soils and field crops. A. F. Gustafson.—Part II, Pastures. D. B. Johnstone-Wallace.—Part III, Soil map and soil types. F. B. Howe and A. F. Gustafson. June 1934.
613. An economic study of land utilization in Montgomery County, 1932. F. F. Hill and G. T. Blanch. June 1934.
614. Rural social and economic areas in central New York. Dwight Sanderson. June 1934.
615. Clothing purchased by farm families in Tompkins County, New York, 1927-28. Beulah Blackmore. June 1934.
616. Study of artificial incubation of game birds: I, Temperature requirements for pheasant and quail eggs; II, humidity requirements for pheasant and quail eggs. A. L. Romanoff. Nov. 1934.
617. Interests, activities, and problems of rural young folk: I, Women 15 to 29 years of age. M. B. Thurow. Dec. 1934.
618. Electric hotbeds for propagating woody cuttings. Donald Wyman and M. W. Nixon. Dec. 1934.
619. Classification and agricultural value of New York soils. F. B. Howe. Jan. 1935.
620. Marketing and distribution of certain perishable farm products in the Lower Hudson Valley. W. C. Hopper and C. W. Pierce. 1934.

MEMOIRS

146. The buffer capacity of peat soils. B. D. Wilson and M. J. Plice. Mar. 1933.
147. The comparative value of different colonies of bees for fruit pollination. A. W. Woodrow. June 1933.
148. The occurrence of *Azotobacter* in peat soils of New York. J. K. Wilson and B. D. Wilson. June 1933.
149. The character of the peat deposits of New York. B. D. Wilson and E. V. Staker. June 1933.
150. Biochemistry and biophysics of the developing hen's egg: II, Influence of composition of air. A. L. Romanoff and A. J. Romanoff. Dec. 1933.
151. Manganese an essential element for green plants. E. F. Hopkins. Jan. 1934.
152. The relative growth and development of corn varieties of widely different maturity dates during successive time intervals throughout their life cycle. R. G. Wiggins. Feb. 1934.
153. Brand canker of rose caused by *Coniothyrium wernsdorffiae* Laubert. Cynthia Westcott. Feb. 1934.
154. A study of some ecological factors influencing seed-stalk development in beets (*Beta vulgaris* L.). Emil Chroboczek. Mar. 1934.
155. Studies in the biology of *Phytophthora infestans* (Mont.) De Bary. Willard Crosier. Mar. 1934.
156. Relation of nitrate nitrogen to the carbohydrate and nitrogen content of onions. A. L. Wilson. Mar. 1934.
157. Studies on powdery mildew of cereals. Alberto Graf-Marin. Apr. 1934.
158. Bottom rot of lettuce. G. R. Townsend. Apr. 1934.
159. A comparative study of the green-fluorescent bacterial plant pathogens. F. M. Clara. Apr. 1934.
160. Methods used in an economic study of land utilization in Tompkins County, New York, and in other similar studies in New York. A. B. Lewis. Apr. 1934.
161. Physiological and chemical changes in carrots during growth and storage. Hans Platenius. Apr. 1934.
162. Longevity of *Rhizobium japonicum* in relation to its symbiont on the soil. J. K. Wilson. Apr. 1934.
163. Vegetative and reproductive responses associated with fruit development in the cucumber. J. P. McCollum. June 1934.
164. Aquatic diptera: Part I, Nemocera, exclusive of Chironomidae and Ceratopogonidae. O. A. Johannsen. June 1934.
165. Forest-type studies in the Adirondack region. C. C. Heimburger. June 1934.
166. Acidity, antacid buffering, and nutrient content of forest litter in relation to humus and soil. M. J. Plice. June 1934.
167. Factors affecting the development of the cotyledonary buds of the common bean, *Phaseolus vulgaris*. C. F. Moreland. June 1934.
168. Studies of the effects of storage temperature on the propagation value of potato tubers. J. D. Hartman. June 1934.
169. A physiological study of dormancy in *Tilia* seed. J. N. Spaeth. June 1934.

NEW YORK STATE AGRICULTURAL EXPERIMENT STATION, GENEVA

BULLETINS

618. The quality of vegetable seeds on sale in New York in 1932. M. T. Munn. Jan. 1933.
619. Effects of fertilizers and rotation on earliness and total yields of tomatoes. C. B. Sayre. Feb. 1933.
620. New or noteworthy fruits, XI. G. H. Howe. Mar. 1933.

621. Abnormal enlargement of peas from plants affected with root-rot. J. G. Horsfall and Z. I. Kertesz. Mar. 1933.
622. Some carbohydrate changes in shelled green peas. Z. I. Kertesz. Mar. 1933.
623. Experiments with commercial nitrogenous fertilizers on apple orchards. J. D. Harlan and R. C. Collison. Mar. 1933.
624. Evaluation of applications of lime-sulfur for the control of apple scab. W. O. Gloyer. Mar. 1933.
625. Raspberry growing in New York State: Cultural practices and disease control. G. L. Slate and W. H. Rankin. Apr. 1933.
626. The laboratory detection of bovine mastitis. G. J. Hucker. Apr. 1933.
627. Codling moth control. S. W. Harman. Apr. 1933.
628. Sterilization of ice cream freezers. A. C. Dahlberg and J. C. Marquardt. Apr. 1933.
629. Some facts about soil management in a New York orchard. R. C. Collison and J. D. Harlan. June 1933.
630. Thermophilic bacteria in milk pasteurized by the high-temperature, short-time process. M. W. Yale and C. D. Kelly. July 1933.
631. Controlling rosy milk outbreaks. C. D. Kelly. July 1933.
632. Relations between orchard soils and cover crops. R. C. Collison. July 1933.
633. The relative vigor and productivity of potato plants from basal and apical sets. F. C. Stewart. Aug. 1933.
634. Frozen fruits for ice cream. J. C. Hening and A. C. Dahlberg. Aug. 1933.
635. Biological control of the oriental fruit moth. D. M. Daniel, James Cox, and Aubrey Crawford. Sept. 1933.
636. Tar distillate emulsions for the control of the rosy aphid and other fruit insects. F. Z. Hartzell and P. J. Parrott. Oct. 1933.
637. Tar distillate emulsions for the control of the black cherry aphid. F. Z. Hartzell. Nov. 1933.
638. Crown gall and hairy root of apples in nursery and orchard. W. O. Gloyer. Jan. 1934.
639. The temperature of milk immediately after milking and strainer capacity. A. C. Dahlberg and H. L. Durham. Jan. 1934.
640. Non-arsenical dusts for cauliflower worm control in western New York. G. E. R. Hervey and C. E. Palm. Jan. 1934.
641. Four years of commercial fertilizers on currants in the Hudson River Valley. L. C. Anderson. Jan. 1934.
642. The quality of vegetable seeds on sale in New York in 1933. M. T. Munn. Feb. 1934.
643. Dusting miscellaneous seeds with red copper oxide to combat damping-off. J. G. Horsfall, A. G. Newhall, and C. E. F. Guterman. Feb. 1934.
644. A study of apple maggot control measures. P. J. Chapman and O. H. Hammer. May 1934.
645. Proved sires and partially proved dams in breeding dairy cattle for production. A. C. Dahlberg. July 1934.
646. Fertilizer responses of Baldwin apple trees on an acid soil. R. C. Collison and J. D. Harlan. July 1934.
647. Winter injury of Baldwin apple trees and its relation to previous tree performance and nutritional treatment. R. C. Collison and J. D. Harlan. July 1934.
648. The feeding habits of the sinuate pear borer in relation to control practices. Hugh Glasgow. July 1934.
649. Random notes on fruit tree rootstocks and plant propagation. H. B. Tukey and K. D. Brase. Dec. 1934.
650. Zinc oxide as a seed and soil treatment for damping-off. J. G. Horsfall. Dec. 1934.

TECHNICAL BULLETINS

206. Viability of eggs and larvae of the apple maggot (*Rhagoletis pomonella* Walsh) at 32° F. P. J. Chapman. Feb. 1933.
207. Bacteriological studies of a high-temperature, short-time pasteurizer. M. W. Yale. Feb. 1933.
208. Notes on the species of apples: I, The American crabapples. G. P. Van Eseltine. Feb. 1933.
209. Chromosome numbers in aneuploid apple seedlings. B. R. Nebel. Mar. 1933.
210. The spray value of nicotine supplements for aphids. H. C. Hockett. July 1933.
211. Heat transfer thru stainless steel and glass-lined steel in dairy pasteurizers. J. C. Marquardt, W. D. Phetepiece, Jr., and A. C. Dahlberg. July 1933.
212. Lysimeter investigations: III, Mineral and water relations and final nitrogen balance in legume and non-legume crop rotations for a period of 16 years. R. C. Collison, H. G. Beattie, and J. D. Harlan. Aug. 1933.
213. Temperature variations in bacteriological incubators. C. S. Pederson, M. W. Yale, and Richard Eglinton. Aug. 1933.
214. Notes on the species of apples: II, The Japanese flowering crabapples of the Sieboldii group and their hybrids. G. P. Van Eseltine. Aug. 1933.
215. Morphology of the digestive tract of the apple maggot fly, *Rhagoletis pomonella* Walsh. R. W. Dean. Aug. 1933.

216. The effect of inoculation on the quality, chemical composition, and bacterial flora of sauerkraut. C. S. Pederson. Sept. 1933.
217. *Glypta rufiscutellaris* Cresson, an Ichneumonid larval parasite of the oriental fruit moth. A. W. Crawford. Sept. 1933.
218. Influence of the cion and of an intermedlate stem-piece upon the character and development of roots of young apple trees. H. B. Tukey and K. D. Brase. Nov. 1933.
219. The oxidase system of a non-browning yellow peach. Z. I. Kertesz. Dec. 1933.
220. Chromosome structure in Tradescantiae: V, Optical analysis of a somatic telophase chromosome. B. R. Nebel. Dec. 1933.
221. Studies on barley smuts and on loose smut of wheat. M. L. Ruttle (Mrs. Nebel). Feb. 1934.
222. Some factors influencing the germination of lettuce seed in seed laboratory practice. A. L. Shuck. Feb. 1934.
223. Pasteurized milk flavor and creaming power as affected by heating medium temperatures and pasteurizer linings. J. C. Marquardt and A. C. Dahlberg. Feb. 1934.
224. Cream flavors and viscosity as affected by the temperature of pasteurization and of the heating medium. J. C. Marquardt and A. C. Dahlberg. July 1934.
225. Control of the spruce gall aphid in nursery plantings. F. L. Gambrell. Dec. 1934.
226. The manufacture of cream cheese by the Geneva method. A. C. Dahlberg and J. C. Marquardt. Dec. 1934.

[HORTICULTURAL MONOGRAPH]

The vegetables of New York: Vol. 1, Part III, Sweet corn. W. T. Tapley, W. D. Enzie, and G. P. Van Eseltine. 1934. (Published as part of the New York State agricultural experiment station report for the year ending June 1934.)

**NORTH CAROLINA AGRICULTURAL EXPERIMENT STATION, STATE COLLEGE STATION,
RALEIGH
BULLETINS**

280. The value of crop rotation in the Coastal Plain area. R. H. Rogers and H. B. Mann. Jan. 1933.
281. Approved practices for peanut growers. B. F. Fulton, P. H. Kime, S. G. Lehman, and H. B. Mann. Jan. 1933.
282. Grazing crops for poultry. R. S. Dearstyne and P. H. Kime. Feb. 1933.
283. Results of five years' fertilizer experiments with Irish potatoes in eastern North Carolina. C. B. Williams, H. B. Mann, and J. J. Skinner. Feb. 1933.
284. The home market for North Carolina cotton. J. G. Knapp. Mar. 1933.
285. The value of limestone on Toxaway loam and Porter's loam soils. C. B. Williams, W. H. Rankin, and S. C. Clapp. Apr. 1933.
286. The value of permanent pasture for fattening pigs. E. H. Hostetler and J. E. Foster. June 1933.
287. Sanitation as a method of controlling stomach worms in lambs. E. H. Hostetler and J. E. Foster. June 1933.
288. A study of North Carolina dairies. R. H. Rogers. June 1933.
289. North Carolina farm prices of cotton in relation to grade and staple length. J. G. Knapp and S. L. Clement. Apr. 1934.
290. Capons and caponizing. R. S. Dearstyne, N. W. Williams, and C. O. Bollinger. June 1933.
291. The relation of the type of pruning to the control of coniothyrium cane blight. C. F. Williams and R. F. Poole. June 1933.
292. Crop response to lime and fertilizer on muck soil. C. B. Williams, H. B. Mann, and J. L. Rea, Jr. Jan. 1934.
293. Agricultural classification and evaluation of North Carolina soils, including the fertilization of crops on soil groups. C. B. Williams, W. B. Cobb, and H. B. Mann. Feb. 1934.
294. Current investigations of the North Carolina agricultural experiment station, 1933-34. 1934.
295. Rural-urban migration in North Carolina, 1920 to 1930. C. H. Hamilton. Feb. 1934.
296. Relation of the quality of cotton planting seed to length of staple. J. H. Moore. Feb. 1934.
297. Practices relating to control of tobacco mosaic. S. G. Lehman. May 1934.
298. The growth of the farm family in relation to its activities, based upon an investigation of families of white farmers in Wake County, North Carolina. C. P. Loomis. June 1934.
299. The value of gypsum as a supplement to a concentrated fertilizer. L. G. Willis. June 1934.
300. Approved practices for alfalfa growers. P. H. Kime and H. B. Mann. Sept. 1934.

TECHNICAL BULLETINS

43. Taxation of agriculture in North Carolina. G. W. Forster and M. C. Leager. June 1933.
44. Hematology of the fowl: A, Studies on normal avian blood; B, Studies on the hematology of avian typhoid. F. W. Cook and R. S. Dearstyne. Jan. 1934.
45. Spinning quality of cotton in relation to seed purity and care of seed-stocks. J. H. Moore and R. T. Stutts. May 1934.
46. Contaminated soil and cultural practices as related to occurrence and spread of tobacco mosaic. S. G. Lehman. May 1934.
47. Some potential changes induced by liming suspensions of a peat soil. L. G. Willis. June 1934.

NORTH DAKOTA AGRICULTURAL EXPERIMENT STATION, STATE COLLEGE STATION,
FARGO

BULLETINS

262. Carload shipments of livestock from North Dakota farms. A. H. Benton. Jan. 1933.
263. (Technical.) Wiltshire sides, factors which influence production and quality. J. H. Shepperd and Albert Severson. Jan. 1933.
264. Barley production in North Dakota. T. E. Stoa. Jan. 1933.
265. Poisonous plants and plant products. O. A. Stevens. Mar. 1933.
266. Leafy spurge, life history and habits. H. C. Hanson and V. E. Rudd. Mar. 1933.
267. Gooseberries, varieties, breeding, culture and use. A. F. Yeager and Esther Latzke. Mar. 1933.
268. (Technical.) Flaxseed, factors influencing price in North Dakota. H. E. Ratcliffe. Feb. 1933.
269. Wild flowers of North Dakota. O. A. Stevens. May 1933.
270. Some edible and poisonous mushrooms of North Dakota. H. L. Barnett. June 1933.
271. Incomes and cost of living of farm families in North Dakota, 1923-1931. E. A. Willson. June 1933.
272. (Technical.) Hedging grain by farmers' elevators, gains and losses. A. H. Benton. June 1933.
273. Farm reorganization and management in east central North Dakota. H. R. Danielson and R. S. Kifer. June 1933.
274. Lamb fattening trials. D. J. Griswold. June 1933.
275. Cattle marketed in North Dakota, 1929-30-31 and some factors underlying their production. H. G. Anderson and A. H. Benton. Nov. 1933.
276. Tomato breeding. A. F. Yeager. Nov. 1933.
277. Control of leafy spurge and review of literature on chemical weed control. H. L. Barnett and H. C. Hanson. May 1934.
278. Carpenter worm, biology and control. J. A. Munro and A. C. Fox. Oct. 1934.

OHIO AGRICULTURAL EXPERIMENT STATION, WOOSTER

BULLETINS

516. Fifty-first annual report of the Ohio agricultural experiment station for the year ended June 30, 1932. C. G. Williams [and others]. Jan. 1933.
517. A survey of Ohio orchard soils relative to phosphorus distribution and acidity. J. H. Gourley and R. M. Smock. Jan. 1933.
518. Studies on the nutritive value of milk: II, The effect of pasteurization on some of the nutritive properties of milk. W. E. Krauss, J. H. Erb, and R. G. Washburn. Jan. 1933.
519. A study of the ash constituents of apple fruits during the growing season. E. F. Hopkins and J. H. Gourley. Feb. 1933.
520. The use of formaldehyde dust in growing seedlings. J. D. Wilson and P. E. Tilford. Feb. 1933.
521. Roadside marketing of agricultural products by Ohio farmers. C. W. Hauck and H. M. Herschler. Mar. 1933.
522. Control of Alternaria blight of ginseng with Bordeaux mixture and injuries accompanying its use. H. A. Runnels and J. D. Wilson. Mar. 1933.
523. Sources of market milk and butterfat in Ohio. C. G. McBride and T. K. Cowden. May 1933.
524. The potato scab-gnat, *Pnyxia scabiei* (Hopkins). H. L. Gui. May 1933.
525. Flower growing. Alex Laurie, V. H. Ries, L. C. Chadwick, and G. H. Poesch. June 1933.
526. Twenty years of Ohio agriculture, 1910-1930. J. I. Falconer. July 1933.
527. Dusting versus spraying apple orchards in Ohio. F. H. Ballou and I. P. Lewis. Aug. 1933.
528. Dependable fruits, varieties for commercial and home use. C. W. Ellenwood and J. S. Shoemaker. Sept. 1933.
529. Some rural social agencies in Ohio, a study of trends, 1921-1931. C. E. Lively. Sept. 1933.
530. Ohio agricultural statistics, 1932. A. R. Tuttle, R. E. Straszheim, and P. P. Wallrabenstein. Sept. 1933.
531. Motor transportation of livestock in Ohio. G. F. Henning. Dec. 1933.
532. Fifty-second annual report of the Ohio agricultural experiment station for the year ended June 30, 1933. C. G. Williams [and others]. Feb. 1934.
533. Recent trends in the rural population of Ohio. P. G. Beck. May 1934.
534. Cottonseed meal for pigs. W. L. Robison. May 1934.
535. Some factors which influence the fruiting habit of Henderson's bush lima bean (*Phaseolus lunatus*). Leon Havis. June 1934.
536. Market movements of Ohio eggs. L. G. Foster and F. E. Davis. June 1934.
537. The gladiolus thrips *Taeniothrips gladioli* M. & S. E. A. Herr. Aug. 1934.
538. Alfalfa-timothy hay for the dairy farm: Part I, Growing high-grade hay in liberal amounts. M. A. Bachtell and Harold Allen.—Part II, Increased hay feeding for dairy cows. C. F. Monroe and Harold Allen. Aug. 1934.
539. Leaf mold resistance in the tomato. L. J. Alexander. Aug. 1934.
540. Alfalfa in Ohio. C. J. Willard, L. E. Thatcher, and J. S. Cutler. Sept. 1934.
541. Experiments in thinning peaches. J. S. Shoemaker. Oct. 1934.

- 542. Ohio agricultural statistics, 1933. G. S. Ray, A. R. Tuttle, and P. P. Wallrabenstein. Nov. 1934.
- 543. Cereal hays for Ohio. L. E. Thatcher. Nov. 1934.
- 544. Some observations on forty-six years of Ohio weather. C. A. Patton. Dec. 1934.
- 545. Nerve degeneration associated with avitaminosis A in the white rat. T. S. Sutton, H. E. Setterfield, and W. E. Krauss. Dec. 1934.

OKLAHOMA AGRICULTURAL EXPERIMENT STATION, STILLWATER

BULLETINS

- 208. Farm production costs in Oklahoma, 1931. P. H. Stephens. Feb. 1933.
- 209. Cotton experiments at the Lawton (Oklahoma) field station, 1916-1931. W. M. Osborn. Mar. 1933.
- 210. Sorghums for grain and forage. B. F. Kiltz [and others]. Feb. 1933.
- 211. A study of certain economic factors in relation to social life among Oklahoma cotton farmers. O. D. Duncan and J. T. Sanders. Apr. 1933.
- 212. Economic aspects of the grade and staple length of cotton produced in Oklahoma. R. A. Ballinger and C. C. McWhorter. Oct. 1933.
- 213. Results of three years of lamb feeding. A. E. Darlow. Nov. 1933.
- 214. Moisture and fertility relations of subsoil variations in heavy silt loam soil at Goodwell, Oklahoma. H. H. Finnell. Nov. 1933.
- 215. The economy of soil nitrogen under semiarid conditions. H. H. Finnell. Dec. 1933.
- 216. Raw organic matter accumulations under various systems of culture. H. H. Finnell. Dec. 1933.
- 217. The effect of saline and alkaline waters on domestic animals. V. G. Heller. Dec. 1933.
- 218. The effect of arsenic, as used in poisoning grasshoppers, upon birds. F. E. Whitehead. June 1934.
- 219. The sale of cotton in the seed in Oklahoma. L. S. Ellis, A. M. Dickson, and C. C. McWhorter. Oct. 1934.
- 220. The effect of the ration on wool growth and on certain wool characteristics. A. E. Darlow, V. G. Heller, and W. R. Felton. Sept. 1934.
- 221. Financial operations of a group of Oklahoma farmers' elevators, 1930-1932. R. A. Ballinger. Oct. 1934.
- 222. History and control of the boll weevil in Oklahoma. C. E. Sanborn [and others]. June 1934.

OREGON AGRICULTURAL EXPERIMENT STATION, CORVALLIS

BULLETINS

- 309. Mineral feeds. J. R. Haag. Feb. 1933.
- 310. An economic study of the cherry industry with special reference to Oregon. M. N. Nelson and G. L. Sulerud. Feb. 1933.
- 311. Maintaining fertility of Grande Ronde Valley soils. W. L. Powers and D. E. Richards. Mar. 1933.
- 312. Cost of keeping dairy herd sires and suggestions on their selection and management. H. E. Selby and I. R. Jones. May 1933.
- 313. Pullorum disease (contagious white diarrhea) of poultry. W. T. Johnson and E. M. Dickinson. June 1933.
- 314. Coccidiosis of the chicken. W. T. Johnson. June 1933.
- 315. Costs and practices in establishing walnut orchards in Oregon. A. S. Burrier and C. E. Schuster. June 1933.
- 316. Biochemical investigations of certain winter pears. J. C. Moore. June 1933.
- 317. The removal of lead and arsenic spray residues from apples and pears. R. H. Robinson and M. B. Hatch. Sept. 1933.
- 318. Cost and efficiency in dairy farming in Oregon. H. E. Selby, A. S. Burrier, and P. M. Brandt. Sept. 1933.
- 319. Crinkle disease of strawberry. S. M. Zeller. Oct. 1933.
- 320. Planning the Willamette Valley farmhouse for family needs. Maud Wilson. Oct. 1933.
- 321. Dormant sprays and their use for the control of insect pests of fruit trees in Rouge River Valley. L. G. Gentner and R. K. Norris. Dec. 1933.
- 322. Some diseases of Oregon fish and game and identification of parts of game animals. J. N. Shaw, B. T. Simms, and O. H. Muth. May 1934.
- 323. A preliminary survey of the food of Oregon trout. R. E. Dimick and D. C. Mote. May 1934.
- 324. Cost and efficiency in raising dairy heifers in Oregon. H. E. Selby and G. W. Kuhlman. June 1934.
- 325. Liming western Oregon soils. R. E. Stephenson and W. L. Powers. June 1934. Revision of Bul. 237.
- 326. Methods of cooling and storing cream for Oregon's dairy farms, influence on the quality of butter which can be manufactured. G. H. Wilster, Hans Hoffmann, and P. M. Brandt. June 1934.
- 327. Lungworms (*Dictyocaulus filaria* Rudolphi) in sheep and goats. J. N. Shaw. June 1934.
- 328. Studies with alfalfa hay for milk production. I. R. Jones, P. M. Brandt, and J. R. Haag. June 1934.
- 329. Growth, reproduction and lactation of dairy cattle fed dry rations varying in mineral and vitamin content. I. R. Jones, J. R. Haag, and P. M. Brandt. June 1934.
- 330. The root weevils injurious to strawberries in Oregon. D. C. Mote. June 1934.
- 331. Comparative efficiency of farm milk coolers. G. H. Wilster, Hans Hoffmann, and F. E. Price. June 1934.

332. The establishment and maintenance of herds of cattle free from Bang's disease (infectious abortion). B. T. Simms and O. H. Muth. June 1934.
333. Cost of producing turkey hatching eggs in Oregon. A. S. Burrier, F. L. Knowlton, and H. E. Selby. Oct. 1934.
334. Applied research contribution to Oregon's agricultural income, a biennial report of activities and accomplishments [of the Oregon agricultural experiment station for the period ending June 30, 1934]. W. A. Schoenfeld and R. S. Besse. Dec. 1934.

PENNSYLVANIA AGRICULTURAL EXPERIMENT STATION, STATE COLLEGE

BULLETINS

283. (Technical bulletin.) Growth and yield in oak forests of Pennsylvania. A. C. McIntyre. Mar. 1933.
284. Corn borer control with farm machinery. H. N. Worthley and R. U. Blasingame. Mar. 1933.
285. Spraying for codling moth control. H. N. Worthley. Mar. 1933.
286. Social activities of the families in the Unionville District, Chester County, Pennsylvania. W. V. Dennis. Apr. 1933.
287. (Technical bulletin.) The homogenization of milk and cream. F. J. Doan and C. H. Minster. May 1933.
288. A comparison of feeder lambs. T. B. Keith and W. L. Henning. May 1933.
289. Varieties of corn for central Pennsylvania. C. F. Noll and C. J. Irvin. May 1933.
290. The management of filler apple trees. F. N. Fagan. May 1933.
291. (Technical bulletin.) Rickets in calves. S. I. Bechdel [and others]. June 1933.
292. Labor requirements for Pennsylvania farms. J. E. McCord and C. E. Cronemeyer. June 1933.
293. 46th annual report for the fiscal year ended June 30, 1933. R. L. Watts [and others]. July 1933.
294. Twenty-five years of orchard soil fertility experiments. F. N. Fagan, R. D. Anthony, and W. S. Clarke, Jr. Aug. 1933.
295. Varieties of alfalfa in Pennsylvania. H. B. Musser and C. J. Irvin. Sept. 1933.
296. Electrically heated dairy utensil sterilizers. J. E. Nicholas, J. A. Sperry, and L. F. Tomey. Oct. 1933.
297. County government costs in Pennsylvania. F. P. Weaver and H. F. Alderfer. Aug. 1933.
298. (Technical bulletin.) The Polyporaceae of Pennsylvania, the genus Polyporus. L. O. Overholts. Sept. 1933.
299. The artificial propagation of ring-necked pheasants. E. W. Callenbach and C. A. Hiller. Oct. 1933.
300. Virginia pine in Pennsylvania. A. C. McIntyre. Nov. 1933.
301. Baits for oriental fruit moth. S. W. Frost. Nov. 1933.
302. The respiration calorimeter, a description of the construction and operation of the respiration calorimeter for the larger farm animals at the Pennsylvania state college. W. W. Braman. Nov. 1933.
303. The vitamin D requirements of growing chicks and laying hens. R. R. Murphy, J. E. Hunter, and H. C. Kandel. Feb. 1934.
304. (Technical bulletin.) A simplified method for the rapid determination of lead residues on apples. D. E. H. Frear and D. E. Haley. Mar. 1934.
305. Types of farming in Pennsylvania. Emil Rauchenstein and F. P. Weaver. Apr. 1934.
306. Potato growing with tractor power. A. W. Clyde and R. U. Blasingame. May 1934.
307. Linseed meal for growing and fattening lambs. T. B. Keith and W. L. Henning. May 1934.
308. 47th annual report for the fiscal year ended June 30, 1934. R. L. Watts [and others]. July 1934.
309. Price movements and Pennsylvania agriculture. F. P. Weaver and D. H. Walter. Oct. 1934.
310. Methods of sampling milk. D. H. Bailey. Nov. 1934.
311. Spraying and dusting apples, costs, grades of fruit, returns. H. W. Thurston, Jr., and H. N. Worthley. Nov. 1934.
312. (Technical bulletin.) Soft-curd milk. F. J. Doan and R. C. Welch. Dec. 1934.

PUERTO RICO AGRICULTURAL EXPERIMENT STATION, MAYAGUEZ

BULLETINS

35. Sugarcane variety P. O. J. 2878 in Puerto Rico. R. L. Davis. June 1934.
36. Parasites and parasitic diseases of cattle in Puerto Rico. H. L. Van Volkenberg. Oct. 1934.

RHODE ISLAND AGRICULTURAL EXPERIMENT STATION, KINGSTON

BULLETINS

238. The efficacy of pigeon pox vaccine in the vaccination of chickens against fowl pox. J. P. Delaplane and H. O. Stuart. Sept. 1933.
239. Home refrigeration methods in rural Rhode Island. B. M. Kuschke and Margaret Whittemore. Sept. 1933.
240. A study of consumers' preferences and practices in buying and using eggs. R. B. Corbett. Sept. 1933.
241. The cost of producing milk in Rhode Island. J. L. Tennant. Jan. 1934.

242. Optimum soil-nitrate levels for table beets, their effect on certain nitrogen-fractions in juice expressed from the leaves. J. B. Smith and F. S. Schlenker. Jan. 1934.
243. The influence of crop plants on those which follow, IV. T. E. Odland, J. B. Smith, and S. C. Damon Jan. 1934.
244. A hemophilic bacillus as the cause of an infectious rhinitis (coryza) of fowls. J. P. Delaplane, L. E. Erwin, and H. O. Stuart. May 1934.
245. Putting green grasses and their management. H. F. A. North and T. E. Odland. July 1934.
246. Normal crops and the supply of available soil manganese. B. E. Gilbert. July 1934.

SOUTH CAROLINA AGRICULTURAL EXPERIMENT STATION, CLEMSON COLLEGE

BULLETINS

287. The qualitative nature of rural depopulation in Santuc Township, South Carolina, 1900-1930. Wilson Gee. Jan. 1933.
288. An economic study of Sumter County agriculture. W. C. Jensen, B. A. Russell, and Marvin Guin. Jan. 1933.
289. Green soybeans, alfalfa, and permanent pasture as forages for fattening hogs. E. G. Godbey, E. D. Kyzer, and T. M. Clyburn. Mar. 1933.
290. Farm prices of cotton related to its grade and staple length in selected local markets in South Carolina, seasons 1930-31 and 1931-32. J. S. Burgess, Jr., and Marvin Guin. June 1933.
291. Analyses of commercial fertilizers. R. N. Brackett and J. H. Woodward. Aug. 1933.
292. The libraries of South Carolina. M. E. Frayser. Oct. 1933.
293. Raising dairy calves by a limited milk feeding plan. E. C. Elting and J. P. LaMaster. Jan. 1934.
294. The southern corn stalk borer in South Carolina. O. L. Cartwright. Feb. 1934.
295. The codling moth in South Carolina. W. C. Nettles. May 1934.
296. Occupational mobility among farmers: Part I, Mobility patterns. B. O. Williams. June 1934.
297. Analyses of commercial fertilizers. Aug. 1934.
298. Farm real estate tax delinquency in South Carolina, a preliminary report. G. H. Aull and Ernest Riley. Aug. 1934.
299. A study of expenditures for family living by 46 South Carolina rural families. M. E. Frayser. Sept. 1934.

SOUTH DAKOTA AGRICULTURAL EXPERIMENT STATION, BROOKINGS

BULLETINS

275. The germination of seed corn and its relation to the occurrence of molds during germination. A. N. Hume and C. J. Franzke. Feb. 1933.
276. Winter wheat production in South Dakota. K. H. W. Klages. Mar. 1933.
277. Rammed earth walls for farm buildings. R. L. Patty and L. W. Minium. Apr. 1933.
278. Methods of feeding and grain rations for fattening lambs. J. W. Wilson, Turner Wright, and F. U. Fenn. Apr. 1933.
279. The growth and decline of South Dakota trade centers, 1901-1933. P. H. Landis. Apr. 1933.
280. The results of twenty years complete soil fertility tests, Brookings, S. D. J. G. Hutton. Apr. 1933.
281. Oat feed as a substitute for roughage. T. M. Olson. July 1933.
282. Farmers' elevators in the spring wheat area of South Dakota: I, Business operations, 1921-22 to 1930-31. R. E. Post. Dec. 1933.
283. Oil of chenopodium and chenopodium plants for the eradication of round worms in swine. Floyd Leblanc, Turner Wright, and J. B. Taylor. Mar. 1934.
284. Wheat and wheat by-products for laying hens. W. C. Tully. May 1934.
285. Sorghums for forage and grain in South Dakota. A. N. Hume and Clifford Franzke. Apr. 1934.
286. Reliability and adequacy of South Dakota farm price data. John Muehlbeier. June 1934.
287. Comparative metabolism of several calcareous materials used in poultry feeding. W. C. Tully and K. W. Franke. June 1934.
288. The plum tree borer (*Synanthedon pictipes* G. & R.), its distribution, life history, economic importance and control. G. I. Gilbertson. June 1934.
289. Rural relief in South Dakota, with special attention to rural relief families under the New Deal relief program. P. H. Landis. June 1934.
290. The detection of mastitis in dairy herds. J. H. Jacobsen and T. M. Olson. Jan. 1935.
291. Small grain and flax varieties in South Dakota. K. H. W. Klages. Oct. 1934.

TENNESSEE AGRICULTURAL EXPERIMENT STATION, KNOXVILLE

BULLETINS

147. How to combat certain pests of the household. Simon Marcovitch. Feb. 1933.
148. Jersey Redskin, a fall-crop Irish potato. B. D. Drain. May 1933.
149. Fertilizers and manure for corn. C. A. Mooers. June 1933.

150. Control of weevils in stored beans and cowpeas. Simon Marcovitch. Mar. 1934.
151. The woolly apple aphid in Tennessee. Simon Marcovitch. Mar. 1934.
152. The conservation of burnt lime, limestone, dolomite, and calcium silicate in soil as influenced by methods of incorporation. W. H. MacIntire, W. B. Ellett, W. M. Shaw, and H. H. Hill. Apr. 1934. Also published as Va. Sta. Tech. Bul. 51.
153. Farm price of cotton in relation to quality, a progress report. C. E. Allred, G. H. Hatfield, and P. B. Boyer. Aug. 1934.

TEXAS AGRICULTURAL EXPERIMENT STATION, COLLEGE STATION

BULLETINS

474. The effect of sunlight and other factors on the strength and color of cotton fabrics. M. A. Grimes. Feb. 1933.
475. Ingestion of poison by the boll weevil. H. J. Reinhard and F. L. Thomas. July 1933.
476. Feeding for efficient growth and prevention of slipped tendons in chickens. R. M. Sherwood and J. R. Couch. Aug. 1933.
477. Vitamin A content of foods and feeds. G. S. Fraps and Ray Treichler. July 1933.
478. The storage and seasoning of pecan bud wood. F. R. Brison. Aug. 1933.
479. The common sheep-scab mite and its control. O. G. Babcock and W. L. Black. Oct. 1933.
480. Wheat versus milo for dairy cows. O. C. Copeland. Aug. 1933.
481. Poisoning of cattle by species of groundsel (*Senecio longilobus* Benth., and *Senecio ridgellii* Torr. & Gray). F. P. Mathews. Oct. 1933.
482. Soils of Henderson, Hidalgo, Milam, Nacogdoches, Navarro, Wichita, Willacy, and Victoria Counties. G. S. Fraps. Oct. 1933.
483. Improved methods of utilizing the Magnolia fig. H. M. Reed. Dec. 1933.
484. Rate of water evaporation in Texas. R. E. Karper. Nov. 1933.
485. Varieties of rice for Texas. R. H. Wyche and H. M. Beachell. Nov. 1933.
486. New developments in hog houses and equipment. Fred Hale and H. P. Smith. Nov. 1933.
487. Commercial fertilizers in 1932-33. G. S. Fraps and S. E. Asbury. Dec. 1933.
488. Commercial feeding stuffs, from September 1, 1932, to August 31, 1933. F. D. Fuller and James Sullivan. Dec. 1933.
489. The diet of Texas school children. Jessie Whitacre. Mar. 1934.
490. The effect of time and rate of application of nitrate of soda on the yield of cotton. E. B. Reynolds, P. R. Johnson, and B. C. Langley. Mar. 1934.
491. Dental decay among Texas school children. Jessie Whitacre. Aug. 1934.
492. Cottonseed meal in rations of horses and mules. R. H. Williams, J. M. Jones, and J. H. Jones. Aug. 1934.
493. The amount of vitamin A potency required by hens for egg production. R. M. Sherwood and G. S. Fraps. Aug. 1934.
494. Growing cotton under irrigation in the Wichita Valley of Texas. C. H. McDowell. Aug. 1934.
495. The vitamin A requirements of dairy cows. G. S. Fraps, O. C. Copeland, and Ray Treichler. Aug. 1934.
496. Forage sorghums in Texas. J. R. Quinby, J. C. Stephens, R. E. Karper, and D. L. Jones. Oct. 1934.
497. The mixed carload in distribution of vegetables from the Lower Rio Grande Valley of Texas. W. E. Paulson. Nov. 1934.
498. Commercial fertilizers in 1933-34. G. S. Fraps and S. E. Asbury. Nov. 1934.
499. Chronic copper poisoning in sheep. I. B. Boughton and W. T. Hardy. Dec. 1934.
500. *Psilostrophe tagetinae* and *Psilostrophe gnaphalodes*, two plants poisonous to sheep and cattle on the ranges of the Southwest. F. P. Mathews. Oct. 1934.
501. Price-quality relationships in farmers' cotton markets of Texas. W. E. Paulson and J. F. Hembree. Dec. 1934.
502. Commercial feeding stuffs, from September 1, 1933 to August 31, 1934. F. D. Fuller and James Sullivan. Dec. 1934.

UTAH AGRICULTURAL EXPERIMENT STATION, LOGAN

BULLETINS

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VERMONT AGRICULTURAL EXPERIMENT STATION, BURLINGTON

BULLETINS

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354. A study of natural reproduction in Vermont forests: II, The effect of thinning on white pine reproduction. G. P. Burns. June 1933.
355. Cash contribution to the family income made by Vermont farm homemakers. L. H. Johnson and Marianne Muse. June 1933.
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VIRGINIA AGRICULTURAL EXPERIMENT STATION, BLACKSBURG

BULLETINS

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WASHINGTON AGRICULTURAL EXPERIMENT STATION, PULLMAN

BULLETINS

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BULLETINS

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BULLETINS

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WYOMING AGRICULTURAL EXPERIMENT STATION, LARAMIE

BULLETINS

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INDEX OF AUTHORS

- Abell, M. F., N. H. Bul. 273.
Ackerson, C. W., Nebr. Res. Bul. 74.
Adams, R. L., Calif. Bul. 570, 581.
Adams, W. R., Vt. Bul. 379.
Addington, L. H., N. Mex. Bul. 226.
Alberts, H. W., Alaska Bul. 11.
Albrecht, W. A., Mo. Bul. 322.
Alder, Byron, Utah Bul. 248.
Alderfer, H. F., Pa. Bul. 297.
Alderman, W. H., Minn. Bul. 297, 305.
Aldous, A. E., Kans. Tech. Bul. 38.
Alexander, L. J., Ohio Bul. 539.
Alldredge, E. E., Ala. Bul. 239.
Allen, E. K., Hawaii Bul. 70.
Allen, Harold, Ohio Bul. 538.
Allen, O. N., Hawaii Bul. 70.
Alley, H. R., Mo. Res. Bul. 213.
Allin, B. W., Ky. Bul. 352, 355; Mont. Bul. 286.
Allred, C. E., Tenn. Bul. 153.
Almquist, H. J., Calif. Bul. 561.
Amburgey, L. V., Ky. Bul. 340.
Ames, C. T., Miss. Bul. 302.
Anderson, Arthur, Nebr. Bul. 283, 286.
Anderson, D. A., Iowa Res. Bul. 158.
Anderson, E. O., Conn. (Storrs) Bul. 184, 195, 197.
Anderson, H. G., N. Dak. Bul. 275.
Anderson, L. C., N. Y. State Bul. 641.
Anderson, P. J., Copn. (State) Bul. 350, 359, 364.
Anderson, W. A., N. Y. (Cornell) Bul. 591, 607.
Andes, E. J., Mont. Bul. 276.
Anthony, R. D., Pa. Bul. 294.
Appleby, Virginia, Mo. Res. Bul. 205.
Archibald, J. G., Mass. Bul. 300.
Ark, P. A., Calif. Bul. 586.
Armstrong, W. D., Ga. Bul. 185.
Asbury, S. E., Tex. Bul. 487, 498.
Ascham, Leah, Ga. Bul. 177, 179.
Asdell, S. A., N. Y. (Cornell) Bul. 603.
Ashby, R. C., Ill. Bul. 388, 408.
Ashcroft, J. M., W. Va. Bul. 261.
Ashworth, U. S., Mo. Res. Bul. 189, 190, 191, 220.
Athow, William, Wash. Bul. 284.
Atkeson, F. W., Idaho Bul. 203, 206.
Aull, G. H., S. C. Bul. 298.
Austin, W. W., Colo. Bul. 404.
Babcock, O. G., Tex. Bul. 479.
Bachtell, M. A., Ohio Bul. 538.
Bailey, C. H., Minn. Bul. 296.
Bailey, D. H., Pa. Bul. 310.
Bailey, E. M., Conn. (State) Bul. 346, 351, 354, 355, 362, 363, 365.
Bailey, S. F., Calif. Hilgardia, vol. 7, no. 12; vol. 8, no. 7.
Bainer, Roy, Calif. Bul. 577, 580.
Baker, C. E., Ind. Bul. 379.
Baker, D. D., Mo. Res. Bul. 200.
Baker, F. H., Nev. Bul. 132.
Baker, G. L., Del. Bul. 187.
Baker, K. F., Wash. Bul. 298, 304.
Baker, M. L., Nebr. Bul. 281.
Baker, W. C., N. H. Tech. Bul. 60.
Bakke, A. L., Iowa Res. Bul. 165.
Bakken, H. H., Wis. Res. Bul. 124.
Ballinger, R. A., Okla. Bul. 212, 221.
Ballou, F. H., Ohio Bul. 527.
Baragar, A. E., Nebr. Res. Bul. 68.
Barbee, O. E., Wash. Bul. 289.
Barber, G. W., Va. Tech. Bul. 47, 55.
Barmore, M. A., Colo. Tech. Bul. 9.
Barnes, B. F., Okla. Bul. 210.
Barnett, H. L., N. Dak. Bul. 270, 277.
Barnette, R. M., Fla. Bul. 265.
Barr, H. T., Ark. Bul. 287; La. Bul. 253.
Barre, H. J., Iowa Bul. 304.
Bartholomew, R. P., Ark. Bul. 288, 289, 310.
Bartlett, J. W., N. J. Bul. 572.
Bartlett, R. W., Ill. Bul. 397.
Batjer, L. P., N. Y. (Cornell) Bul. 575, 592.
Bauer, F. C., Ill. Bul. 398, 402, 405; Soil Rpt. 54, 55, 56.
Bauer, Walter, Calif. Bul. 566.
Bausman, R. O., Del. Bul. 190.
Beach, G. A., Colo. Bul. 408; Tech. Bul. 8.
Beachell, H. M., Tex. Bul. 485.
Bears, G. E., Wash. Bul. 292, 306.
Beath, O. A., Wyo. Bul. 193, 194, 200.
Beattie, H. G., N. Y. State Tech. Bul. 212.
Beaumont, A. B., Mass. Bul. 297, 306, 309.
Beaumont, J. H., Md. Bul. 368.
Bechdel, S. I., Pa. Bul. 291.
Beck, P. G., Ohio Bul. 533.
Becker, R. B., Fla. Bul. 262, 264.
Beckwith, C. S., N. J. Bul. 558.
Beers, H. W., N. Y. (Cornell) Bul. 560.
Bender, C. B., N. J. Bul. 563, 564.
Bennett, Emmett, Mass. Bul. 300.
Bennett, H. H., N. J. Bul. 552.
Bennett, R. E., Iowa Soil Rpt. 70, 71.
Bentley, R. C., Iowa Bul. 307, 318.
Benton, A. H., N. Dak. Bul. 262, 272, 275.
Benton, T. H., Iowa Soil Rpt. 72.
Beresford, Hobart, Idaho Bul. 202, 203.
Berg, Anthony, W. Va. Bul. 260.
Bergstedt, Barton, Mont. Bul. 284.
Berry, L. N., N. Mex. Bul. 208, 221, 224.
Berry, M. H., Md. Bul. 344, 354.
Besse, R. S., Oreg. Bul. 334.
Bewley, J. P., Md. Bul. 362.
Bibbee, P. C., W. Va. Bul. 258.
Bice, C. M., Hawaii Bul. 67.
Bingham, G. H., Mont. Bul. 290.

- Binkley, A. M., Colo. Bul. 407.
 Bioletti, F. T., Calif. Hilgardia, vol. 8, no. 6.
 Bird, E. W., Iowa Res. Bul. 175.
 Bird, J. J., Mich. Spec. Bul. 245.
 Bisbey, Bertha, Mo. Res. Bul. 205.
 Bizal, R. S., N. Y. (Cornell) Bul. 610.
 Black, A. G., Iowa Res. Bul. 161.
 Black, W. L., Tex. Bul. 479.
 Blackmon, G. H., Fla. Bul. 270.
 Blackmore, Beulah, N. Y. (Cornell) Bul. 615.
 Blair, A. W., N. J. Bul. 571.
 Blake, M. A., N. J. Bul. 559, 566, 567.
 Blakeslee, L. H., Mich. Spec. Bul. 255.
 Blanch, G. T., N. Y. (Cornell) Bul. 613.
 Blasingame, R. U., Pa. Bul. 284, 306.
 Bliss, D. E., Iowa Res. Bul. 166.
 Bliss, W. K., Mo. Bul. 323.
 Blodgett, F. M., N. Y. (Cornell) Bul. 581.
 Blood, P. T., N. H. Bul. 271.
 Bohstedt, Gustav, Wis. Res. Bul. 115, 123.
 Bold, H. C., Vt. Bul. 378.
 Bollinger, C. O., N. C. Bul. 290.
 Bonde, Reiner, Maine Bul. 370.
 Borden, A. D., Calif. Bul. 579.
 Borgeson, Carl, Minn. Bul. 312.
 Borthwick, H. A., Calif. Bul. 580.
 Bortner, C. E., Ky. Bul. 349.
 Bosworth, M. R., Mich. Tech. Bul. 133.
 Botkin, C. W., N. Mex. Bul. 219.
 Botsford, H. E., N. Y. (Cornell) Bul. 558.
 Boucher, R. V., Mo. Res. Bul. 198.
 Boughton, I. B., Tex. Bul. 499.
 Bourne, B. A., Fla. Bul. 267.
 Bowling, G. A., W. Va. Bul. 259.
 Boyce, A. M., Calif. Hilgardia, vol. 8, no. 11.
 Boyce, E. F., Vt. Bul. 351, 361, 366, 372, 381, 385.
 Boyd, Fred, Ky. Bul. 350.
 Boyden, R. E., Ky. Bul. 342.
 Boyer, P. B., Tenn. Bul. 153.
 Boyer, W. C., Md. Bul. 344.
 Brackett, E. E., Nebr. Bul. 282, 289.
 Brackett, R. N., S. C. Bul. 291.
 Bradfield, Richard, N. Y. (Cornell) Bul. 592.
 Bradlee, J. L., Vt. Bul. 358.
 Bradley, C. J., Ky. Bul. 343, 352, 355.
 Braman, W. W., Pa. Bul. 302.
 Brandon, J. F., Colo. Bul. 404.
 Brandt, P. M., Oreg. Bul. 318, 326, 328, 329.
 Brannen, C. O., Ark. Bul. 311.
 Brase, K. D., N. Y. State Bul. 649; Tech. Bul. 218.
 Bray, C. I., La. Bul. 236, 242, 244, 249.
 Brazie, Donald, Wash. Bul. 299.
 Breazeale, D. F., Iowa Res. Bul. 175.
 Breazeale, J. F., Ariz. Bul. 147; Tech. Bul. 53.
 Brennen, C. A., Nev. Bul. 133.
 Brierley, W. G., Minn. Bul. 297; Tech. Bul. 100.
 Brigham, G. D., Conn. (Storrs) Bul. 195.
 Brigham, W. T., Conn. (State) Bul. 356.
 Brison, F. R., Tex. Bul. 478.
 Britton, W. E., Conn. (State) Bul. 344, 349, 360.
 Brock, R. L., Mo. Res. Bul. 216.
 Brody, Samuel, Mo. Res. Bul. 180, 189, 190, 191, 192, 193, 208, 209, 220.
 Brooker, M. A., Fla. Bul. 263, 266.
 Broughton, L. B., Md. Bul. 349, 350.
 Brown, A. A., Mass. Bul. 299.
 Brown, A. P., Utah Bul. 246.
 Brown, B. A., Conn. (Storrs) Bul. 186, 187, 189, 190.
 Brown, C. A., Ill. Bul. 396.
 Brown, D. E., Md. Bul. 358, 363.
 Brown, G. A., Mich. Spec. Bul. 233.
 Brown, H. B., La. Bul. 246, 259.
 Brown, J. G., Ariz. Bul. 142, 148; Tech. Bul. 51.
 Brown, P. E., Iowa Bul. 298, 305; Soil Rpt. 69, 70, 71, 72.
 Brown, S. M., Calif. Hilgardia, vol. 8, no. 5.
 Brown, W. L., Ga. Bul. 183.
 Bruce, M. R., Nev. Bul. 133.
 Bruce, O. C., Md. Bul. 351, 362.
 Brueckner, A. L., Md. Bul. 369.
 Brueckner, H. J., N. Y. (Cornell) Bul. 606.
 Brundage, M. R., Calif. Bul. 549.
 Brundage, R. C., Ind. Bul. 395.
 Brunstad, A., Wash. Bul. 284.
 Bryan, A. A., Iowa Res. Bul. 163.
 Buckner, G. D., Ky. Bul. 346.
 Burdette, R. F., Md. Bul. 365.
 Burgess, J. S., Jr., Miss. Tech. Bul. 21; S. O. Bul. 290.
 Burke, A. D., Ala. Bul. 239.
 Burke, Edmund, Mont. Bul. 280.
 Burlison, W. L., Ill. Bul. 394, 404.
 Burns, G. P., Vt. Bul. 354.
 Burns, R. H., Wyo. Bul. 196.
 Burr, W. W., Nebr. Bul. 287.
 Burr, Walter, Mo. Bul. 323.
 Burrier, A. S., Oreg. Bul. 315, 318, 333.
 Burt, H. J., Mo. Res. Bul. 188, 199.
 Butler, O. R., N. H. Tech. Bul. 56.
 Byers, G. B., Ky. Bul. 345.
 Callenbach, E. W., Pa. Bul. 299.
 Camburn, O. M., Vt. Bul. 359, 368.
 Camp, A. F., Fla. Bul. 273.
 Camp, J. P., Fla. Bul. 269.
 Campbell, M. H., Vt. Bul. 382.
 Canan, R. D., Ind. Bul. 382.
 Cardon, P. V., Utah Bul. 250.
 Carmichael, B. E., Md. Bul. 349.
 Carnecross, J. W., N. J. Bul. 555, 575.
 Carpenter, M. D., Pa. Bul. 291.
 Carroll, W. E., Ill. Bul. 390.
 Carter, D. G., Ark. Bul. 287, 305, 306.
 Carter, W. H., Iowa Bul. 322.
 Cartwright, O. L., S. C. Bul. 294.
 Carver, J. S., Wash. Bul. 284, 299.
 Case, H. C. M., Ill. Bul. 403.
 Cathcart, C. S., N. J. Bul. 551, 554, 556, 557, 561, 565, 573, 577, 578, 582.
 Cavert, W. L., Minn. Bul. 309.
 Chadwick, L. C., N. Y. (Cornell) Bul. 571; Ohio Bul. 525.
 Chapin, J. W., Mich. Spec. Bul. 237.
 Chapman, H. D., Calif. Bul. 571.
 Chapman, P. J., N. Y. State Bul. 644; Tech. Bul. 206.
 Chase, W. W., Minn. Tech. Bul. 99.
 Chichester, D. F., N. J. Bul. 560.
 Child, A. M., Minn. Bul. 313.
 Chittenden, D. W., Mo. Res. Bul. 209.
 Christ, J. H., Idaho Bul. 199, 201.
 Christensen, C. L., Wis. Bul. 425, 428.
 Christensen, J. J., Minn. Tech. Bul. 95.
 Chroboczek, Emil, N. Y. (Cornell) Mem. 154.

- Clapp, S. C., N. C. Bul. 285.
 Clara, F. M., N. Y. (Cornell) Mem. 150.
 Clark, Noble, Wis. Bul. 425, 428.
 Clark, S. P., Ariz. Bul. 146.
 Clarke, W. S., Jr., Pa. Bul. 294.
 Clawson, Marion, Utah Bul. 244.
 Clayton, C. F., Vt. Bul. 357.
 Cleaver, H. M., Ind. Bul. 370, 392, 393.
 Clement, S. L., N. C. Bul. 289.
 Cline, J. A., Mo. Bul. 335.
 Clinton, G. P., Conn. (State) Bul. 358.
 Clyburn, T. M., S. C. Bul. 289.
 Clyde, A. W., Pa. Bul. 306.
 Cobb, W. B., N. C. Bul. 293.
 Cochran, F. D., La. Bul. 251.
 Cockerill, P. W., N. Mex. Bul. 215, 224.
 Coe, F. M., Utah Bul. 245, 251.
 Coffin, Margaret, Md. Bul. 346.
 Colby, A. S., Ill. Bul. 393.
 Cole, L. J., Wis. Res. Bul. 118.
 Coleman, J. M., Fla. Bul. 269.
 Collier, G. W., Ind. Bul. 378, 389.
 Collier, T. R., Utah Bul. 252.
 Collins, E. V., Iowa Res. Bul. 162.
 Collins, M. A., Iowa Res. Bul. 169.
 Collison, R. C., N. Y. State Bul. 623, 629, 632, 646, 647; Tech. Bul. 212.
 Combs, W. B., Minn. Tech. Bul. 97.
 Connell, W. E., Kans. Bul. 264.
 Cook, F. W., N. C. Tech. Bul. 44.
 Copeland, O. C., Tex. Bul. 480, 495.
 Corbett, R. B., R. I. Bul. 240.
 Corl, C. S., Colo. Bul. 401.
 Cory, E. N., Md. Bul. 348, 361.
 Costa, David, La. Bul. 254.
 Cotton, J. R., La. Bul. 246.
 Couch, J. R., Tex. Bul. 476.
 Coulter, H. N., Mich. Spec. Bul. 249.
 Cover, Sylvia, Mo. Res. Bul. 205.
 Cowan, E. W., Mo. Bul. 333.
 Cowan, F. T., Colo. Tech. Bul. 7.
 Cowden, T. K., Ohio Bul. 523.
 Cowing, M. V., Mass. Bul. 310.
 Cowles, M. L., Wis. Res. Bul. 114; Wis. Stencil Bul. [unnumbered]; Res. Bul. 121.
 Cox, James, N. Y. State Bul. 635.
 Cox, R. F., Kans. Bul. 264.
 Cox, R. W., Minn. Bul. 305, 311.
 Crafts, A. S., Calif. Hilgardia, vol. 7, no. 9; vol. 8, no. 4.
 Cralley, E. M., Ark. Bul. 295.
 Crawford, A. W., N. Y. State Bul. 635; Tech. Bul. 217.
 Crawford, R. F., N. Mex. Bul. 223.
 Crickman, C. W., Minn. Bul. 295, 301, 314; Va. Bul. 289.
 Crider, F. J., Ariz. Tech. Bul. 53.
 Cronmeyer, C. E., Pa. Bul. 292.
 Crosier, Willard, N. Y. (Cornell) Mem. 155.
 Cross, Floyd, Colo. Bul. 409.
 Crowley, D. J., Wash. Bul. 276.
 Culbertson, C. C., Iowa Bul. 299.
 Cummings, M. B., Vt. Bul. 352.
 Cunningham, O. C., N. Mex. Bul. 226, 227.
 Curry, A. S., N. Mex. Bul. 220.
 Curtis, J. J., Colo. Bul. 404.
 Cutler, J. S., Ohio Bul. 540.
 Dahlberg, A. C., N. Y. State Bul. 628, 634, 639, 645; Tech. Bul. 211, 223, 224, 226.
 Damon, S. C., R. I. Bul. 243.
 Dana, H. J., Wash. Bul. 285.
 Daniel, D. M., N. Y. State Bul. 635.
 Daniels, L. B., Colo. Bul. 400, 410.
 Danielson, H. R., N. Dak. Bul. 273.
 Darlow, A. E., Okla. Bul. 213, 220.
 Daugherty, M. M., Del. Bul. 182.
 Davey, A. E., Calif. Hilgardia, vol. 7, no. 13.
 Davidson, J. B., Iowa Bul. 297, 302, 304, 322.
 Davidson, O. W., N. J. Bul. 559.
 Davis, F. E., Ohio Bul. 536.
 Davis, H. A., N. H. Bul. 277, 278, 281, 283.
 Davis, H. P., Nebr. Res. Bul. 69, 73.
 Davis, I. G., Conn. (Storrs) Bul. 191.
 Davis, R. L., P. R. Bul. 35.
 Day, R. K., Ind. Bul. 391.
 Deakin, Alan, Wis. Res. Bul. 118.
 Dean, R. W., N. Y. State Tech. Bul. 215.
 Dearborn, R. B., N. H. Tech. Bul. 59.
 Dearstyne, R. S., N. C. Bul. 282, 290; Tech. Bul. 44.
 Decker, S. W., Ill. Bul. 400, 409, 410.
 Degman, E. S., Md. Bul. 366.
 Delaplane, J. P., R. I. Bul. 238, 244.
 Deming, G. W., Colo. Tech. Bul. 5.
 DeMoss, W. R., Mo. Res. Bul. 207.
 Dennis, W. V., Pa. Bul. 286.
 DenUyl, Daniel, Ind. Bul. 391.
 Derrick, Calvin, N. J. Bul. 552.
 Detjen, L. R., Del. Bul. 180.
 DeTurk, E. E., Ill. Soil Rpt. 54, 55, 56.
 DeVault, S. H., Md. Bul. 352, 355, 357, 365.
 Dickinson, E. M., Oreg. Bul. 313.
 Dickson, A. M., Okla. Bul. 219.
 Dickson, J. G., Wis. Res. Bul. 116.
 Dickson, W. F., Mont. Bul. 275, 293.
 Dill, Robert, Nev. Bul. 135.
 Dimick, R. E., Oreg. Bul. 323.
 Dimock, W. W., Ky. Bul. 338, 354.
 Ditman, L. P., Md. Bul. 348.
 Doan, F. J., Pa. Bul. 287, 312.
 Doehlert, C. A., N. J. Bul. 558.
 Doneen, L. D., Wash. Bul. 296.
 Dorrance, A. B., Mich. Spec. Bul. 240.
 Douglass, Earl, Colo. Tech. Bul. 4.
 Dove, W. F., Maine Bul. 375.
 Dow, G. F., Maine Bul. 367, 373, 374.
 Drain, B. D., Tenn. Bul. 148.
 Draize, J. H., Wyo. Bul. 193, 194, 200.
 Draxler, J. H., Wis. Res. Bul. 119.
 Drewes, Harm, Mich. Spec. Bul. 249.
 Dugas, A. L., La. Bul. 235, 248.
 Dulin, T. G., Ga. Bul. 182.
 Duncan, C. W., Mich. Tech. Bul. 134.
 Duncan, O. D., Okla. Bul. 211.
 Dunlap, Frederick, Mo. Bul. 323.
 Dunning, Duncan, Calif. Bul. 549.
 Dunning, R. G., Vt. Bul. 352.
 Durham, H. L., N. Y. State Bul. 639.
 Durrell, L. W., Colo. Bul. 402, 403.
 Dye, Marie, Mich. Tech. Bul. 138.
 Easter, E. O., Ala. Bul. 241.
 Ebeling, Walter, Calif. Bul. 583.
 Eckles, C. H., Minn. Tech. Bul. 91.
 Eckles, W. C., Mo. Res. Bul. 214.

- Eddy, C. O., Ky. Bul. 353.
 Edgerton, C. W., La. Bul. 256.
 Edwards, F. R., Ga. Bul. 181, 184.
 Edwards, P. R., Ky. Bul. 338.
 Eglinton, Richard, N. Y. State Tech. Bul. 213.
 Eke, P. A., Idaho Bul. 198.
 Elcock, H. A., N. Mex. Bul. 207.
 Ellenberger, H. B., Vt. Bul. 362.
 Ellenwood, C. W., Ohio Bul. 528.
 Ellett, W. B., Tenn. Bul. 152; Va. Tech. Bul. 54.
 Ellington, E. V., Wash. Bul. 294, 295.
 Ellis, L. S., Okla. Bul. 219.
 Ellison, J. M., Va. Bul. 290.
 Elting, E. C., S. C. Bul. 293.
 Elwell, J. A., Iowa Soil Rpt. 70.
 Embleton, Harry, Ariz. Bul. 143, 145.
 Emsweller, S. L., Calif. Bul. 584; Hilgardia, vol. 7, no. 16; vol. 8, no. 7.
 Enzle, W. D., N. Y. State [Horticultural monograph] 1934.
 Epple, W. F., Ind. Bul. 385.
 Eppley, G. E., Md. Bul. 360.
 Eppley, G. F., Md. Bul. 362.
 Eppson, H. F., Wyo. Bul. 193, 194.
 Erb, J. H., Ohio Bul. 518.
 Erdman, H. E., Calif. Bul. 557.
 Erdman, H. H., Wis. Res. Bul. 119.
 Erikson, S. E., Ky. Bul. 342.
 Erwin, A. T., Iowa Bul. 308.
 Erwin, L. E., R. I. Bul. 244.
 Essig, E. O., Calif. Bul. 553, 567.
 Etheridge, W. C., Mo. Bul. 326, 331.
 Evans, L. E., Colo. Bul. 401.
 Evans, M. M., Ariz. Bul. 142; Tech. Bul. 51.
 Everson, C. L., Md. Bul. 369.
 Evvard, J. M., Iowa Bul. 299.
 Fabian, F. W., Mich. Tech. Bul. 140.
 Fagan, F. N., Pa. Bul. 290, 294.
 Fairbank, J. P., Calif. Bul. 577.
 Fairbanks, F. L., N. Y. (Cornell) Bul. 558.
 Fairburn, D. C., Iowa Res. Bul. 170.
 Falconer, J. I., Ohio Bul. 526.
 Farmer, R. S., Iowa Res. Bul. 155.
 Farr, Doris, Utah Bul. 252.
 Farrell, F. D., Mo. Bul. 323.
 Farris, N. F., N. J. Bul. 565.
 Fawcett, H. S., Calif. Bul. 553.
 Feese, D. M., Mont. Bul. 270.
 Fellers, C. R., Mass. Bul. 296.
 Felton, W. R., Okla. Bul. 220.
 Fenn, F. U., S. Dak. Bul. 278.
 Fenstermacher, Reuel, Minn. Bul. 294, 308.
 Fergus, E. N., Ky. Bul. 341.
 Filley, H. C., Nebr. Bul. 284; Res. Bul. 71.
 Finch, A. H., Ariz. Tech. Bul. 47.
 Finnell, H. H., Okla. Bul. 210, 214, 215, 216.
 Fish, Marion, N. Y. (Cornell) Bul. 561.
 Fisher, H. J., Conn. (State) Bul. 346.
 Fisher, R. A., Md. Bul. 362.
 Fiske, J. G., N. J. Bul. 550, 562.
 Fitch, J. B., Kans. Tech. Bul. 36.
 Fite, A. B., N. Mex. Bul. 209.
 Fleming, C. E., Nev. Bul. 133.
 Fleshman, C. L., Mo. Res. Bul. 187.
 Fletcher, J. L., La. Bul. 238.
 Fletcher, L. A., Md. Bul. 353.
 Fletcher, P. L., Va. Bul. 288.
 Folger, A. H., Calif. Bul. 575.
 Folsom, Donald, Maine Bul. 368.
 Ford, O. W., Ind. Bul. 381.
 Forster, G. W., N. C. Tech. Bul. 43.
 Foster, J. C., Colo. Tech. Bul. 10.
 Foster, J. E., N. C. Bul. 286, 287.
 Foster, L. G., Ohio Bul. 536.
 Foster, M. T., Mo. Res. Bul. 186.
 Fowler, H. C., Vt. Bul. 353.
 Fox, A. C., N. Dak. Bul. 278.
 France, R. L., Mass. Bul. 314.
 Francioni, J. B., Jr., La. Bul. 236.
 Frandsen, J. H., Mass. Bul. 302.
 Franke, K. W., S. Dak. Bul. 287.
 Franzke, C. J., S. Dak. Bul. 275, 285.
 Fraps, G. S., Tex. Bul. 477, 482, 487, 493, 495, 498.
 Frasier, F. W., Wash. Bul. 284.
 Frayer, J. M., Vt. Bul. 374, 377.
 Frayser, M. E., S. C. Bul. 292, 299.
 Frear, D. E. H., Pa. Bul. 304.
 Freeman, R. C., Ill. Bul. 406.
 Freitag, J. H., Calif. Hilgardia, vol. 8, no. 1; vol. 8, no. 8.
 Frey, P. W., Md. Bul. 349.
 Friend, R. B., Conn. (State) Bul. 348.
 Frink, P. R., Nebr. Res. Bul. 70.
 Frolik, A. L., Nebr. Bul. 288.
 Fromme, F. D., W. Va. Bul. 263.
 Frost, S. W., Pa. Bul. 301.
 Fuller, F. D., Tex. Bul. 488, 502.
 Fuller, J. M., N. H. Tech. Bul. 57.
 Fullilove, W. T., Ga. Bul. 174.
 Fulton, B. F., N. C. Bul. 281.
 Funk, E. M., Mo. Bul. 332, 341.
 Gabriel, H. S., Del. Bul. 185, 191.
 Gaddum, L. W., Fla. Bul. 268.
 Galbraith, J. K., Calif. Bul. 554, 555, 582.
 Gambrell, F. L., N. Y. State Tech. Bul. 225.
 Gans, A. R., N. Y. (Cornell) Bul. 597.
 Garcia, Fabian, N. Mex. Bul. 216, 218.
 Gardner, Robert, Colo. Tech. Bul. 2, 6.
 Gardner, W. U., Mo. Res. Bul. 196.
 Gardner, Willard, Utah Bul. 232.
 Garey, L. F., Minn. Bul. 303.
 Garlock, F. L., Ark. Bul. 298.
 Garman, Philip, Conn. (State) Bul. 353, 356.
 Garner, M. L., Miss. Tech. Bul. 21.
 Garnett, W. E., Va. Bul. 291, 295.
 Garver, H. L., Wash. Bul. 285.
 Gaston, H. P., Mich. Spec. Bul. 232.
 Gaylord, F. C., Ind. Bul. 370, 392, 394.
 Geddes, J. A., Utah Bul. 249.
 Gee, Wilson, S. C. Bul. 287.
 Gentner, L. G., Oreg. Bul. 321.
 Gershoy, Alexander, Vt. Bul. 367, 378.
 Gibbs, C. S., Mass. Bul. 295, 308, 311.
 Gieger, Marvin, Miss. Tech. Bul. 20.
 Giese, Henry, Iowa Bul. 302, 303, 304.
 Gieseker, L. F., Mont. Bul. 273, 274, 291.
 Gilbert, B. E., R. I. Bul. 246.
 Gilbert, C. S., Wyo. Bul. 200.
 Gilbertson, G. I., S. Dak. Bul. 238.
 Gile, B. M., Ark. Bul. 298.
 Gilligan, G. M., Del. Bul. 186.
 Gilman, V. D., Mont. Bul. 287.
 Giltner, Ward, Mich. Mem. 1.

- Ginsburg, J. M., N. J. Bul. 576, 581.
 Gish, P. T., Va. Bul. 292.
 Glover, L. C., N. H. Tech. Bul. 58.
 Gloyer, W. O., N. Y. State Tech. Bul. 624, 638.
 Gnadinger, C. B., Colo. Bul. 401.
 Godbey, E. G., S. C. Bul. 289.
 Gomez, E. T., Mo. Res. Bul. 182, 194, 206, 207.
 Goodwin, James, Colo. Tech. Bul. 2.
 Goss, D. M., Md. Bul. 362.
 Goss, R. W., Nebr. Res. Bul. 70.
 Gouaux, C. B., La. Bul. 247.
 Gourley, J. H., Ohio Bul. 517, 519.
 Graf-Marin, Alberto, N. Y. (Cornell) Mem. 157.
 Graham, T. W., Minn. Tech. Bul. 95.
 Granett, Philip, N. J. Bul. 576, 581.
 Grant, R. T., Md. Bul. 361.
 Grantham, G. M., Mich. Spec. Bul. 248.
 Grau, F. V., Md. Bul. 362.
 Gray, D. T., Ark. Bul. 297, 312.
 Gray, G. F., Mich. Tech. Bul. 136.
 Gray, L. C., N. J. Bul. 552.
 Greathouse, G. A., Md. Bul. 370.
 Green, Jesse, Mont. Bul. 283.
 Greenwood, M. L., N. Mex. Bul. 213.
 Griffiee, Fred, Maine Bul. 369, 377.
 Grigsby, B. H., Mich. Tech. Bul. 141.
 Grimes, M. A., Tex. Bul. 474.
 Griswold, D. J., N. Dak. Bul. 274.
 Gross, C. R., Md. Bul. 368.
 Gross, I. H., Mich. Tech. Bul. 133.
 Groves, A. B., Va. Tech. Bul. 50.
 Groves, Kermit, Wash. Bul. 286.
 Grunder, M. S., Wash. Bul. 294.
 Guba, E. F., Mass. Bul. 303.
 Gui, H. L., Ohio Bul. 524.
 Guilbert, H. R., Calif. Bul. 560.
 Guin, Marvin, S. C. Bul. 288, 290.
 Gullickson, T. W., Minn. Tech. Bul. 91.
 Gunns, C. A., Calif. Bul. 560.
 Gustafson, A. F., N. Y. (Cornell) Bul. 567, 570, 600, 612.
 Guterma, C. E. F., N. Y. State Bul. 643.
 Guthrie, E. S., N. Y. (Cornell) Bul. 606.
 Guy, H. G., N. H. Tech. Bul. 54.
 Haag, H. M., N. Y. (Cornell) Bul. 598.
 Haag, J. R., Oreg. Bul. 309, 328, 329.
 Haasis, F. A., Calif. Hildgardia, vol. 8, no. 10.
 Haber, E. S., Iowa Bul. 308.
 Hackedorn, Howard, Wash. Bul. 302.
 Haegeler, R. W., Idaho Bul. 200.
 Haenseler, C. M., N. J. Bul. 574.
 Haigh, L. D., Mo. Bul. 321, 333.
 Hale, Fred, Tex. Bul. 486.
 Hales, M. W., Mo. Res. Bul. 215.
 Haley, D. E., Pa. Bul. 304.
 Hall, D. M., Minn. Tech. Bul. 103.
 Hall, I. F., Wis. Bul. 429.
 Hall, W. C., Mo. Res. Bul. 180, 208.
 Haller, M. H., Md. Bul. 368.
 Halligan, C. P., Mich. Spec. Bul. 228.
 Hamilton, C. H., N. C. Bul. 295.
 Hamilton, H. G., Fla. Bul. 263, 266.
 Hammar, C. H., Mo. Bul. 323; Res. Bul. 203.
 Hammer, B. W., Iowa Bul. 300; Res. Bul. 155, 159, 169.
 Hammer, O. H., N. Y. State Bul. 644.
 Hampson, C. C., Wash. Bul. 277, 297.
 Hanson, A. J., Wash. Bul. 279, 280.
 Hanson, H. C., N. Dak. Bul. 266, 277.
 Hardman, George, Nev. Bul. 136.
 Hardy, W. T., Tex. Bul. 499.
 Harlan, J. D., N. Y. State Bul. 623, 629, 646, 647; Tech. Bul. 212.
 Harman, S. W., N. Y. State Bul. 627.
 Harrington, F. M., Mont. Bul. 279.
 Harriott, J. F., N. Y. (Cornell) Bul. 554.
 Harris, C. W., Jr., N. H. Bul. 275.
 Harrison, A. L., N. Y. (Cornell) Bul. 566.
 Harrison, E. S., N. Y. (Cornell) Bul. 578.
 Hart, E. B., Wis. Res. Bul. 115, 123.
 Hart, G. H., Calif. Bul. 560.
 Hart, Hugh, Calif. Bul. 578.
 Hartman, J. D., N. Y. (Cornell) Mem. 168.
 Hartzell, F. Z., N. Y. State Bul. 636, 637.
 Haseman, Leonard, Mo. Bul. 320, 334, 342; Res. Bul. 202.
 Hatch, M. B., Oreg. Bul. 317.
 Hatfield, G. H., Tenn. Bul. 153.
 Hathaway, I. L., Nebr. Res. Bul. 69, 73.
 Hauck, C. W., Ohio Bul. 521.
 Hauke, A. M., Nebr. Bul. 284.
 Hausman, L. A., N. J. Bul. 553, 580.
 Havis, Leon, Ohio Bul. 535.
 Hawkins, R. S., Ariz. Tech. Bul. 46.
 Hay, W. D., Mont. Bul. 270.
 Hayes, H. K., Minn. Bul. 312.
 Hays, F. A., Mass. Bul. 298, 301, 307, 312, 313.
 Headlee, T. J., N. J. Bul. 568, 579.
 Headley, F. B., Nev. Bul. 130, 131, 134.
 Heald, F. D., Wash. Bul. 298, 304.
 Healy, D. J., Ky. Bul. 354.
 Heckart, S. R., Colo. Bul. 406.
 Hedrick, W. O., Mich. Spec. Bul. 247.
 Heimbürger, C. C., N. Y. (Cornell) Mem. 165.
 Heinicke, A. J., N. Y. (Cornell) Bul. 577.
 Heller, V. G., Okla. Bul. 217, 220.
 Helm, C. A., Mo. Bul. 326, 331.
 Hembree, J. F., Tex. Bul. 501.
 Henderson, H. O., W. Va. Bul. 256.
 Hendrickson, A. H., Calif. Bul. 573.
 Hening, J. C., N. Y. State Bul. 634.
 Henke, L. A., Hawaii Bul. 69, 73.
 Henning, G. F., Ohio Bul. 531.
 Henning, W. L., Pa. Bul. 288, 307.
 Henson, Lawrence, Ky. Bul. 341.
 Herr, E. A., Ohio Bul. 537.
 Herreid, E. O., Minn. Tech. Bul. 97.
 Herschler, H. M., Ohio Bul. 521.
 Hershey, A. D., Mich. Tech. Bul. 137.
 Hervey, G. E. R., N. Y. State Bul. 640.
 Heuberger, J. W., Md. Bul. 345, 361, 371.
 Heyward, Frank, Fla. Bul. 265.
 Hibbard, R. P., Mich. Tech. Bul. 141.
 Hickman, C. W., Idaho Bul. 209.
 Hicock, H. W., Conn. (State) Bul. 359.
 Hienton, T. E., Ind. Bul. 373, 374.
 Higgins, B. B., Ga. Bul. 186.
 Higgins, L. J., N. H. Bul. 276, 282.
 Hill, C. L., Calif. Bul. 572.
 Hill, E. B., Mich. Spec. Bul. 241, 250, 254.
 Hill, F. F., N. Y. (Cornell) Bul. 613.
 Hill, H. H., Tenn. Bul. 152; Va. Tech. Bul. 53, 54.
 Hill, O. J., Pa. Bul. 291.
 Hiller, C. A., Pa. Bul. 299.
 Hills, J. L., Vt. Bul. 360, 380.

- Hilton, J. H., Ind. Bul. 373.
 Hinds, H. B., Ariz. Bul. 143.
 Hinds, W. E., La. Bul. 235, 240, 248.
 Hinman, E. H., Nebr. Res. Bul. 67, 72.
 Hinshaw, W. R., Calif. Hilgardia, vol. 8, no. 9.
 Hitchcock, J. A., Vt. Bul. 370.
 Hixson, Ephriam, Okla. Bul. 222.
 Hobart, Charles, Ariz. Tech. Bul. 46.
 Hockensmith, R. D., Colo. Tech. Bul. 2.
 Hodgson, R. E., Wash. Bul. 287, 294, 295.
 Hoffman, M. B., N. Y. (Cornell) Bul. 577.
 Hoffmann, Hans, Oreg. Bul. 326, 331.
 Hoffsommer, H. C., N. Y. (Cornell) Bul. 582.
 Hogan, A. G., Mo. Bul. 330; Res. Bul. 195, 198, 219.
 Holland, E. B., Mass. Bul. 297, 303.
 Holley, K. T., Ga. Bul. 182.
 Holmes, F. S., Md. Bul. 343, 362.
 Hopkins, E. F., N. Y. (Cornell) Mem. 151; Ohio Bul. 519.
 Hopkins, J. A., Jr., Iowa Bul. 312, 316; Res. Bul. 160.
 Hopper, W. C., N. Y. (Cornell) Bul. 585, 586, 620.
 Horne, W. T., Calif. Bul. 585.
 Hornung, T. G., Ill. Bul. 390.
 Horrall, B. E., Ind. Bul. 374, 375, 377.
 Horsfall, J. G., N. Y. (Cornell) Bul. 566; N. Y. State Bul. 621, 643, 650.
 Hoskins, W. M., Calif. Hilgardia, vol. 8, no. 2.
 Hostetler, E. H., N. C. Bul. 286, 287.
 Howe, F. B., N. Y. (Cornell) Bul. 570, 581, 600, 612, 619.
 Howe, G. H., N. Y. State Bul. 620.
 Howell, L. D., Ga. Bul. 174; Miss. Tech. Bul. 21.
 Huber, G. A., Wash. Bul. 290.
 Hucker, G. J., N. Y. State Bul. 626.
 Hockett, H. C., N. Y. State Tech. Bul. 210.
 Huddleson, I. F., Mich. Tech. Bul. 137.
 Hudson, R. S., Mich. Spec. Bul. 253.
 Huffman, C. F., Mich. Tech. Bul. 134.
 Hughes, E. H., Calif. Bul. 578.
 Hughes, H. D., Iowa Bul. 309.
 Hughes, J. S., Kans. Tech. Bul. 34, 36.
 Hulbert, H. W., Idaho Bul. 199.
 Hull, F. E., Ky. Bul. 354.
 Hull, W. W., Miss. Tech. Bul. 20.
 Hume, A. N., S. Dak. Bul. 275, 285.
 Humphrey, E. N., Idaho Bul. 202.
 Hunter, H. A., Md. Bul. 345.
 Hunter, J. E., Pa. Bul. 303.
 Hurd, E. B., Iowa Bul. 323.
 Hurlbut, L. W., Nebr. Bul. 291.
 Hurt, R. H., Va. Bul. 293.
 Huston, R. C., Mich. Tech. Bul. 137.
 Hutcheson, T. B., Va. Bul. 292.
 Hutchins, A. E., Minn. Bul. 298; Tech. Bul. 96.
 Hutson, Ray, Mich. Spec. Bul. 244.
 Huttar, J. C., N. Y. (Cornell) Bul. 558.
 Hutton, J. G., S. Dak. Bul. 280.
 Hypes, J. L., Conn. (Storrs) Bul. 196.
 Iddings, E. J., Idaho Bul. 197, 205.
 Ingersoll, Mary, Md. Bul. 355.
 Inman, B. T., Ky. Bul. 345.
 Insko, W. M., Jr., Ky. Bul. 337, 342, 346.
 Irvin, C. J., Pa. Bul. 259, 295.
 Isely, Dwight, Ark. Bul. 299.
 Isham, P. D., Mass. Bul. 296.
 Jacob, H. E., Calif. Bul. 568.
 Jacobsen, J. H., S. Dak. Bul. 290.
 Jamison, F. S., N. Y. (Cornell) Bul. 599, 602.
 Janes, M. J., Utah Bul. 243.
 Janssen, George, Ark. Bul. 283, 310.
 Jefferson, C. H., Mich. Spec. Bul. 251.
 Jehle, R. A., Md. Bul. 361.
 Jellison, W. L., Minn. Bul. 294.
 Jenkins, E. W., Vt. Bul. 352.
 Jenny, Hans, Mo. Bul. 324.
 Jensen, W. C., S. C. Bul. 238.
 Jewett, H. H., Ky. Bul. 348.
 Johannsen, O. A., N. Y. (Cornell) Mem. 164.
 Johnson, E. M., Ky. Bul. 339.
 Johnson, E. P., Va. Tech. Bul. 56.
 Johnson, E. W., Kans. Bul. 270.
 Johnson, Edward C., Wash. Bul. 291, 305.
 Johnson, Edwin C., Minn. Bul. 302, 307.
 Johnson, H. K., Mo. Bul. 323.
 Johnson, L. H., Vt. Bul. 355.
 Johnson, M. S., Minn. Tech. Bul. 90.
 Johnson, N. W., Idaho Bul. 198, 207, 208; Wash. Bul. 288, 300, 301.
 Johnson, O. R., Mo. Bul. 323.
 Johnson, P. R., Tex. Bul. 490.
 Johnson, R. E., Conn. (Storrs) Bul. 185, 198.
 Johnson, R. F., Idaho Bul. 206, 209.
 Johnson, R. H., Wash. Bul. 299.
 Johnson, S. D., N. Y. (Cornell) Bul. 579.
 Johnson, W. T., Oreg. Bul. 313, 314.
 Johnston, P. E., Ill. Bul. 395.
 Johnston, Stanley, Mich. Spec. Bul. 252.
 Johnstone-Wallace, D. B., N. Y. (Cornell) Bul. 567, 570, 600, 612.
 Jones, C. H., Vt. Bul. 358, 362.
 Jones, D. F., Conn. (State) Bul. 361.
 Jones, D. L., Tex. Bul. 496.
 Jones, E. S., Ga. Bul. 180.
 Jones, E. T., Mo. Bul. 342.
 Jones, H. A., Calif. Hilgardia, vol. 7, no. 16; vol. 8, no. 7.
 Jones, I. R., Oreg. Bul. 312, 328, 329.
 Jones, J. H., Tex. Bul. 492.
 Jones, J. M., Tex. Bul. 492.
 Jones, L. K., Wash. Bul. 290.
 Jones, M. M., Mo. Res. Bul. 197, 209.
 Jordan, P. S., Minn. Bul. 306.
 Joslyn, M. A., Calif. Bul. 551.
 Jungherr, Erwin, Conn. (Storrs) Bul. 188, 200.
 Justice, R. S., Wyo. Bul. 194.
 Kapp, L. C., Ark. Bul. 291, 302.
 Karper, R. E., Tex. Bul. 484, 496.
 Karraker, P. E., Ky. Bul. 349.
 Keim, F. D., Nebr. Bul. 288.
 Keith, T. B., Pa. Bul. 288, 307.
 Kelley, W. P., Calif. Hilgardia, vol. 8, no. 5.
 Kelly, C. D., N. Y. State Bul. 630, 631.
 Kemp, W. B., Md. Bul. 360.
 Kempster, H. L., Mo. Bul. 332, 337.
 Kendall, J. C., N. H. Bul. 270, 280.
 Kennedy, Cornelia, Minn. Tech. Bul. 92.
 Kennedy, J. R., N. Mex. Bul. 225.
 Kertesz, Z. I., N. Y. State Bul. 621, 622; Tech. Bul. 219.
 Kessler, L. H., Wis. Res. Bul. 122.

- Kessler, N. A., Minn. Bul. 299.
 Kezer, Alvin, Colo. Bul. 404; Tech. Bul. 6, 11.
 Kiesselbach, T. A., Nebr. Bul. 283, 286, 287.
 Kifer, R. S., N. Dak. Bul. 273.
 Kik, M. C., Ark. Bul. 284, 286.
 Kiltz, B. F., Okla. Bul. 210.
 Kimbrough, W. D., La. Bul. 239, 245, 254.
 Kime, P. H., N. C. Bul. 281, 282, 300.
 King, F. G., Ind. Bul. 371.
 Kinnison, A. F., Ariz. Tech. Bul. 47.
 Kirkpatrick, E. L., Wis. Res. Bul. 114; Stencil Bul. [unnumbered]; Res. Bul. 121.
 Klages, K. H. W., S. Dak. Bul. 276, 291.
 Klemmedson, G. S., Colo. Bul. 406.
 Kandel, H. C., Pa. Bul. 303.
 Knapp, J. G., N. C. Bul. 284, 289.
 Knott, J. C., Wash. Bul. 287, 294, 295.
 Knott, J. E., N. Y. (Cornell) Bul. 552, 564, 572.
 Knowlton, F. L., Oreg. Bul. 333.
 Knowlton, G. F., Utah Bul. 243.
 Kolb, J. H., Wis. Res. Bul. 117, 120.
 Koonce, Dwight, Colo. Bul. 404; Tech. Bul. 11.
 Kopland, D. V., Mont. Bul. 293.
 Kraemer, Erich, Calif. Bul. 557.
 Krauss, W. E., Ohio Bul. 518, 545.
 Kreutzer, W. A., Colo. Bul. 402.
 Krueger, M. E., Calif. Bul. 549.
 Krusekopf, H. H., Mo. Bul. 323.
 Kuhlman, G. W., Oreg. Bul. 324.
 Kuschke, B. M., R. I. Bul. 239.
 Kyzer, E. D., S. C. Bul. 289.
 Lacroix, D. S., Conn. (State) Bul. 350, 359.
 LaMaster, J. P., S. C. Bul. 293.
 Lamb, L. W., Mich. Tech. Bul. 134.
 La Mont, T. E., N. Y. (Cornell) Bul. 565.
 Landauer, Walter, Conn. (Storrs) Bul. 193.
 Landis, P. H., S. Dak. Bul. 279, 289.
 Landsburg, K. G., Pa. Bul. 291.
 Langley, B. C., Tex. Bul. 490.
 Langley, D. D., Mont. Bul. 276.
 Lantow, J. L., N. Mex. Bul. 211, 214, 227.
 Lantz, E. M., Ariz. Tech. Bul. 45.
 Lascelles, H. R., Colo. Bul. 405.
 Latimer, L. P., N. H. Bul. 274; Tech. Bul. 55.
 Latzke, Esther, N. Dak. Bul. 267.
 Laude, H. H., Kans. Bul. 265, 266.
 Laurie, Alex, Ohio Bul. 525.
 Lea, G. L., Vt. Bul. 373.
 Leager, M. C., N. C. Tech. Bul. 43.
 LeBlanc, Floyd, S. Dak. Bul. 283.
 Leding, A. R., N. Mex. Bul. 219.
 Lee, A. M., Wyo. Bul. 201.
 Lee, L. L., N. J. Bul. 552, 569.
 Lehman, S. G., N. C. Bul. 281, 297; Tech. Bul. 46.
 Leighty, W. J., Iowa Soil Rpt. 72.
 Leith, B. D., Wis. Res. Bul. 116.
 Leonian, L. H., W. Va. Bul. 262.
 Leukel, W. A., Fla. Bul. 269.
 Lewis, A. B., N. Y. (Cornell) Bul. 590; Mem. 160.
 Lewis, E. B., Nebr. Bul. 282, 289.
 Lewis, E. P., Ill. Bul. 401.
 Lewis, I. P., Ohio Bul. 527.
 Lindsey, A. H., Mass. Bul. 299.
 Lindstrom, D. E., Ill. Bul. 392.
 List, G. M., Colo. Bul. 411.
 Lively, C. E., Ohio Bul. 529.
 Lloyd, J. W., Ill. Bul. 410.
 Lloyd, W. E., Calif. Hilgardia, vol. 8, no. 9.
 Long, L. E., Miss. Bul. 300; Tech. Bul. 21.
 Loomis, C. P., N. C. Bul. 298.
 Loveless, W. G., Vt. Bul. 369.
 Lovvorn, R. L., Mo. Bul. 327.
 Lunn, W. M., Md. Bul. 358.
 Lush, J. L., Iowa Bul. 301.
 Lush, R. H., La. Bul. 238, 241, 242.
 Lutman, A. S., Vt. Bul. 365, 384.
 Lutman, B. F., Vt. Bul. 383.
 Lutz, J. F., Mo. Res. Bul. 212.
 Lyness, W. E., Nebr. Bul. 286.
 Lyon, T. L., N. Y. (Cornell) Bul. 574.
 Lytton, L. R., N. Mex. Bul. 219.
 McBride, C. G., Ohio Bul. 523.
 McCall, Ralph, Wash. Bul. 302.
 McCay, C. M., N. Y. (Cornell) Bul. 593.
 McClelland, C. K., Ark. Bul. 301.
 McCollum, J. P., N. Y. (Cornell) Mem. 163.
 McConnell, H. S., Md. Bul. 364.
 McCord, J. E., Pa. Bul. 292.
 McCormick, T. C., Ark. Bul. 285, 296, 313.
 McCosh, S. S., Mich. Tech. Bul. 138.
 MacCreary, Donald, Del. Bul. 181, 184.
 McCue, C. A., Del. Bul. 180, 188.
 McDaniel, E. I., Mich. Spec. Bul. 238, 243.
 MacDaniels, L. H., N. Y. (Cornell) Bul. 556, 573.
 McDonel, K. H., Mich. Tech. Bul. 131.
 McDowell, C. H., Tex. Bul. 494.
 McGeorge, W. T., Ariz. Tech. Bul. 50.
 MacGillivray, J. H., Ind. Bul. 394.
 MacIntire, W. H., Tenn. Bul. 152; Va. Tech. Bul. 54.
 McIntyre, A. C., Pa. Bul. 283, 300.
 McKee, Clyde, Mont. Bul. 270.
 McKenzie, F. F., Mo. Res. Bul. 217.
 McKibben, E. G., Iowa Bul. 297.
 MacLeod, G. F., N. Y. (Cornell) Bul. 569.
 McMahon, Harry, Minn. Tech. Bul. 94.
 McMurtry, J. E., Jr., Md. Bul. 358, 363.
 McNall, P. E., Wis. Bul. 426, 429; Res. Bul. 114; Stencil Bul. [unnumbered].
 McNulty, J. B., Minn. Bul. 302.
 McWhorter, C. C., Okla. Bul. 212, 219.
 Macy, Harold, Minn. Bul. 310; Tech. Bul. 97.
 Macy, R. W., Minn. Tech. Bul. 98.
 Madsen, L. L., N. Y. (Cornell) Bul. 593.
 Magill, W. W., Ky. Bul. 353.
 Mail, G. A., Mont. Bul. 288.
 Manhart, V. C., Ind. Bul. 374, 383.
 Mann, A. R., N. J. Bul. 552.
 Mann, H. B., N. C. Bul. 280, 281, 283, 292, 293, 300.
 Manny, T. B., Ky. Bul. 355.
 Marcovitch, Simon, Tenn. Bul. 147, 150, 151.
 Marold, Ann, Mich. Tech. Bul. 138.
 Marquardt, J. C., N. Y. State Bul. 628; Tech. Bul. 211, 223, 224, 226.
 Marsh, G. L., Calif. Bul. 551.
 Marsh, Hadleigh, Mont. Bul. 285.
 Marshall, G. E., Ind. Bul. 381.
 Marshall, James, Wash. Bul. 293.
 Marshall, R. E., Mich. Spec. Bul. 258.
 Martin, Edgar, Ark. Bul. 303.
 Martin, J. H., Ky. Bul. 337, 342, 346.
 Martin, W. McK., Mont. Bul. 280.
 Martin, W. W., Mo. Bul. 323.

- Massey, Z. A., Ga. Bul. 181, 184.
 Mather, W. G., Jr., N. Y. (Cornell) Bul. 587, 608.
 Mathews, F. P., Tex. Bul. 481, 500.
 Matlock, R. L., Ariz. Bul. 146; Tech. Bul. 46.
 Matthews, E. D., Md. Bul. 362.
 Mayer, I. D., Ind. Bul. 379.
 Mayfield, H. L., Mont. Bul. 277.
 Maynard, L. A., N. Y. (Cornell) Bul. 593.
 Means, R. H., Miss. Bul. 301.
 Meffert, R. L., Mo. Res. Bul. 202.
 Meldrum, H. R., Iowa Soil Rpt. 69, 70, 71, 72.
 Menefee, E. R., Ind. Bul. 390.
 Merchant, C. H., Maine Bul. 364, 366.
 Merriam, Oreana, Mass. Bul. 310.
 Mesnikoff, B. N., Pa. Bul. 291.
 Metzger, C. H., Colo. Bul. 412.
 Metzger, J. E., Md. Bul. 347, 351, 362.
 Michaelian, M. B., Iowa Res. Bul. 155.
 Michelbacher, A. E., Calif. Bul. 567.
 Midgley, A. R., Vt. Bul. 371, 373.
 Mighell, Albert, Iowa Bul. 309.
 Milby, T. T., Iowa Res. Bul. 172.
 Millar, C. E., Mich. Spec. Bul. 248.
 Miller, C. D. Hawaii Bul. 68.
 Miller, Harry, Idaho Bul. 204.
 Miller, J. C., Mo. Res. Bul. 186.
 Miller, Julian C., La. Bul. 239, 245, 251, 258, 260.
 Miller, M. F., Mo. Bul. 323, 327.
 Miller, M. R., Nev. Bul. 136.
 Miller, M. W., Wash. Bul. 292, 306.
 Miller, P. L., Iowa Bul. 306.
 Mills, P. J., La. Bul. 256.
 Minium, L. W., S. Dak. Bul. 277.
 Minneman, P. G., Mich. Spec. Bul. 241, 254.
 Minster, C. H., Pa. Bul. 287.
 Misner, E. G., N. Y. (Cornell) Bul. 551.
 Mitchell, D. R., Wis. Bul. 426.
 Moffett, H. C., Mo. Bul. 325.
 Moles, H. S., La. Bul. 251.
 Monroe, C. F., Ohio Bul. 538.
 Monroe, M. M., Maine Bul. 372, 376.
 Mooers, C. A., Tenn. Bul. 149.
 Moore, H. C., Mich. Spec. Bul. 234, 245, 246.
 Moore, Herbert C., N. H. Bul. 272; Tech. Bul. 57.
 Moore, J. C., Oreg. Bul. 316.
 Moore, J. H., N. C. Bul. 296; Tech. Bul. 45.
 Moore, R. K., Mo. Res. Bul. 203.
 Moreland, C. F., N. Y. (Cornell) Mem. 167.
 Morey, N. B., N. Y. (Cornell) Bul. 563.
 Morgan, E. L., Mo. Bul. 323.
 Morgan, M. F., Conn. (State) Bul. 350.
 Morris, H. P., Minn. Tech. Bul. 92.
 Morrish, R. H., Mich. Spec. Bul. 256.
 Morrison, Gordon, Mich. Spec. Bul. 249.
 Morrow, K. S., W. Va. Bul. 256.
 Morse, H. C., Ariz. Bul. 145.
 Mortenson, W. P., Wis. Res. Bul. 119, 125.
 Moses, B. D., Calif. Bul. 550.
 Mote, D. C., Oreg. Bul. 323, 330.
 Motts, G. N., Mich. Spec. Bul. 235, 237.
 Mowry, Harold, Fla. Bul. 261, 273.
 Muehlbeier, John, S. Dak. Bul. 286.
 Mueller, W. S., Mass. Bul. 302, 314.
 Mulvey, R. R., Ind. Bul. 386.
 Mumford, C. W., Del. Bul. 183.
 Mumford, F. B., Mo. Bul. 321, 328, 333, 340.
 Munger, Francis, Minn. Tech. Bul. 93.
 Munkwitz, R. C., Md. Bul. 344.
 Munn, M. T., N. Y. State Bul. 618, 642.
 Munro, J. A., N. Dak. Bul. 278.
 Munsell, R. I., Conn. (Storrs) Bul. 186.
 Murdock, H. E., Mont. Bul. 281.
 Murneek, A. E., Mo. Res. Bul. 201.
 Murphy, M. M., Jr., Ga. Bul. 185.
 Murphy, R. R., Pa. Bul. 303.
 Murray, W. G., Iowa Bul. 307, 311, 315; Res. Bul. 156.
 Muse, Marianne, Vt. Bul. 355, 375.
 Mussehl, F. E., Nebr. Bul. 280; Res. Bul. 74.
 Musser, H. B., Pa. Bul. 295.
 Muth, O. H., Oreg. Bul. 322, 332.
 Myers, K. H., Ill. Bul. 403.
 Myers, P. B., Del. Bul. 186, 187.
 Neal, J. H., Minn. Tech. Bul. 101.
 Neal, W. M., Fla. Bul. 262, 264.
 Neale, P. E., N. Mex. Bul. 222.
 Nebel, B. R., N. Y. State Bul. 209; Tech. Bul. 220.
 Nebel, Mrs. See Ruttle, M. L.
 Nel, R. G., Calif. Hilgardia, vol. 7, no. 11.
 Nelson, A. L., Wyo. Bul. 195.
 Nelson, Martin, Ark. Bul. 290, 307.
 Nelson, M. N., Oreg. Bul. 310.
 Nettles, W. C., S. C. Bul. 295.
 Nevens, W. B., Ill. Bul. 391.
 Newhall, A. G., N. Y. (Cornell) Bul. 566; N. Y. State Bul. 643.
 Newhouse, N. P., Del. Bul. 181.
 Newlander, J. A., Vt. Bul. 350, 362.
 Newsom, I. E., Colo. Bul. 409.
 Newton, J. H., Colo. Bul. 399.
 Nichols, F. F., Md. Bul. 362.
 Nicholas, J. E., Pa. Bul. 296.
 Nicholls, W. D., Ky. Bul. 350, 351.
 Nichols, M. L., Ala. Bul. 241.
 Nienhuis, A. L., Mich. Tech. Bul. 140.
 Nightingale, G. T., N. J. Bul. 566, 567.
 Nixon, M. W., N. Y. (Cornell) Bul. 618.
 Noecker, N. L., Iowa Res. Bul. 165.
 Noll, C. F., Pa. Bul. 289.
 Norris, R. K., Oreg. Bul. 321.
 North, H. F. A., R. I. Bul. 245.
 North, M. O., Wyo. Bul. 203.
 Norton, E. A., Ill. Soil Rpt. 55, 56.
 Norton, J. B. S., Md. Bul. 345.
 Nygard, I. J., Mont. Bul. 280.
 Odland, T. E., R. I. Bul. 243, 245.
 O'Kane, W. C., N. H. Tech. Bul. 54, 58, 60.
 O'Kelly, J. F., Miss. Tech. Bul. 20.
 Olafson, Peter, N. Y. (Cornell) Bul. 603.
 Oliver, R. B., Mo. Bul. 323.
 Olney, J. F., Nebr. Bul. 290.
 Olsen, N. A., Mo. Bul. 323.
 Olson, H. C., Iowa Bul. 300; Res. Bul. 159; W. Va. Bul. 255.
 Olson, T. M., S. Dak. Bul. 281, 290.
 O'Neal, A. M., Iowa Soil Rpt. 69.
 Orrben, C. L., Iowa Soil Rpt. 71.
 Osborn, W. M., Okla. Bul. 209, 210.
 Oskamp, Joseph, N. Y. (Cornell) Bul. 567, 575, 592, 609.
 Osterberger, B. A., La. Bul. 235, 240, 248.
 Overholser, E. L., Wash. Bul. 286; Pop. Bul. 149.

- Overholts, L. O., Pa. Bul. 298.
 Overley, F. L., Wash. Bul. 285, 286; Pop. Bul. 149.
 Overpeck, J. C., N. Mex. Bul. 207, 225.
 Owens, J. S., Conn. (State) Bul. 350.
 Oyler, Merton, Ky. Bul. 350.
- Painter, W. E., Mo. Res. Bul. 185.
 Palm, C. E., N. Y. State Bul. 640.
 Palmer, L. S., Minn. Tech. Bul. 91, 92.
 Parfitt, E. H., Ind. Bul. 385.
 Park, J. S., Wis. Res. Bul. 118.
 Parker, E. R., Calif. Bul. 576.
 Parker, K. G., N. Y. (Cornell) Bul. 557.
 Parrott, P. J., N. Y. State Bul. 636.
 Parsons, M. S., Maine Bul. 366.
 Partridge, N. L., Mich. Spec. Bul. 242, 257.
 Patton, C. A., Ohio Bul. 544.
 Patty, R. L., S. Dak. Bul. 277.
 Paulson, W. E., Tex. Bul. 497, 501.
 Paxson, A. M., N. Y. (Cornell) Bul. 584.
 Payne, L. F., Kans. Bul. 268; Tech. Bul. 34.
 Pearson, Harry, Wyo. Bul. 197.
 Pederson, C. S., N. Y. State Tech. Bul. 213, 216.
 Peet, L. J., Vt. Bul. 357.
 Peltier, G. L., Nebr. Res. Bul. 66, 76.
 Pentzer, W. T., N. Y. (Cornell) Bul. 604.
 Pepper, H. C., Colo. Bul. 413.
 Percival, G. P., N. H. Bul. 271.
 Peters, W. H., Minn. Bul. 300, 301, 306.
 Petersen, N. F., Nebr. Bul. 287.
 Peterson, G. M., Calif. Bul. 553.
 Pettinger, N. A., Va. Tech. Bul. 46.
 Pettit, R. H., Mich. Spec. Bul. 239.
 Pfau, K. O., N. J. Bul. 572.
 Pheteplace, W. D., Jr., N. Y. State Tech. Bul. 211.
 Phillips, C. D., Ky. Bul. 344.
 Phillips, C. E., Del. Bul. 189.
 Phillips, P. H., Wis. Res. Bul. 123.
 Phillips, R. W., Mo. Res. Bul. 217.
 Phillips, T. G., N. H. Bul. 271; Tech. Bul. 59.
 Phillips, W. J., Va. Tech. Bul. 47, 55.
 Pickett, T. A., Ga. Bul. 182, 185.
 Pickett, W. F., Kans. Bul. 269.
 Pieper, J. J., Ill. Bul. 394.
 Pierce, C. W., N. Y. (Cornell) Bul. 620.
 Pilcher, R. W., Mo. Res. Bul. 195.
 Pirone, P. P., N. Y. (Cornell) Bul. 566.
 Pittman, D. W., Utah Bul. 247.
 Plakidas, A. G., La. Bul. 250, 252.
 Plastryge, W. N., Conn. (Storrs) Bul. 184, 185, 195, 197.
 Platenius, Hans, N. Y. (Cornell) Bul. 602; Mem. 161.
 Plje, M. J., N. Y. (Cornell) Mem. 146, 166.
 Poelma, L. J., Md. Bul. 369.
 Poesch, G. H., Ohio Bul. 525.
 Polson, R. A., Wis. Res. Bul. 117.
 Pond, G. A., Minn. Bul. 295, 309, 314.
 Poole, R. F., N. C. Bul. 291.
 Pope, J. D., Ala. Bul. 240.
 Pope, W. T., Hawaii Bul. 71.
 Porter, D. R., Calif. Hilgardia, vol. 7, no. 15.
 Post, Kenneth, N. Y. (Cornell) Bul. 594.
 Post, R. E., S. Dak. Bul. 282.
 Potter, G. F., N. H. Bul. 279.
 Powell, J. K., N. J. Bul. 552.
 Powell, M. E., Mo. Res. Bul. 181.
- Powers, W. L., Oreg. Bul. 311, 325.
 Pressley, E. H., Ariz. Tech. Bul. 54.
 Price, F. E., Oreg. Bul. 331.
 Price, H. B., Ky. Bul. 352.
 Pridham, A. M. S., N. Y. (Cornell) Bul. 538.
 Prince, A. L., N. J. Bul. 563, 571.
 Prince, F. S., N. H. Bul. 271.
 Procter, R. C., Mo. Res. Bul. 193, 209, 220.
 Proebsting, E. L., Calif. Hilgardia, vol. 7, no. 14.
 Pucher, G. W., Conn. (State) Bul. 352.
- Quayle, H. J., Calif. Bul. 553, 583.
 Quinby, J. R., Tex. Bul. 496.
 Quinlan, L. R., Kans. Bul. 267.
- Ragsdale, A. C., Mo. Bul. 336, 338; Res. Bul. 192.
 Raleigh, W. P., Maine Bul. 370.
 Ramsey, R. J., Ill. Bul. 389, 407.
 Rankin, J. O., Nebr. Res. Bul. 67.
 Rankin, William Houston, N. C. Bul. 285.
 Rankin, William Howard, N. Y. State Bul. 625.
 Ranney, W. P., Minn. Bul. 314.
 Rapport, V. A., Conn. (Storrs) Bul. 194.
 Ratcliffe, H. E., N. Dak. Bul. 268.
 Rauchenstein, Emil, N. H. Bul. 275; Pa. Bul. 305.
 Rawlins, W. A., N. Y. (Cornell) Bul. 569.
 Ray, G. S., Ohio Bul. 542.
 Rea, J. L., Jr., N. C. Bul. 292.
 Records, Edward, Nev. Bul. 132.
 Reddy, C. S., Iowa Res. Bul. 167.
 Reece, R. P., Conn. (Storrs) Bul. 185.
 Reed, H. M., Tex. Bul. 483.
 Reed, H. S., Calif. Bul. 574.
 Reed, R. C., Md. Bul. 369.
 Reid, M. G., Iowa Res. Bul. 174.
 Reid, W. H. E., Mo. Res. Bul. 181, 185, 187, 213, 214, 215, 216.
 Reinhard, H. J., Tex. Bul. 475.
 Reneger, C. A., Md. Bul. 362.
 Renne, R. R., Mont. Bul. 272, 286.
 Rettger, L. F., Conn. (Storrs) Bul. 197.
 Reynolds, E. B., Tex. Bul. 490.
 Reynolds, S. P., Mo. Bul. 323.
 Richards, D. E., Oreg. Bul. 311.
 Richardson, J. E., Mont. Bul. 271, 276, 277.
 Richman, M. W., Ind. Bul. 380.
 Ricks, G. L., Mich. Spec. Bul. 230.
 Riddell, W. H., Kans. Tech. Bul. 36.
 Ries, V. H., Ohio Bul. 525.
 Rietz, J. H., W. Va. Bul. 259.
 Riley, Ernest, S. C. Bul. 298.
 Rinear, E. H., N. H. Bul. 272.
 Rinehart, E. F., Idaho Bul. 209.
 Ritchie, W. S., Mo. Bul. 333; Res. Bul. 219.
 Ritzman, E. G., N. H. Tech. Bul. 53.
 Roberts, E. H., Wash. Bul. 283.
 Roberts, R. H., Wis. Bul. 427.
 Robertson, D. D., Mo. Res. Bul. 200.
 Robertson, D. W., Colo. Bul. 404; Tech. Bul. 5, 11.
 Robertson, E. I., Wash. Bul. 299.
 Robertson, Lynn, Ind. Bul. 387, 388, 389.
 Robinson, Charles, Mich. Tech. Bul. 138.
 Robinson, C. S., Mich. Tech. Bul. 134.
 Robinson, J. L., Iowa Res. Bul. 176.
 Robinson, R. H., Oreg. Bul. 317.
 Robison, W. L., Ohio Bul. 534.
 Robotka, Frank, Iowa Bul. 321.

- Rogers, R. H., N. C. Bul. 280, 288.
 Rohwer, Carl, Colo. Tech. Bul. 3.
 Romanoff, A. J., N. Y. (Cornell) Mem. 150.
 Romanoff, A. L., N. Y. (Cornell) Bul. 616; Mem. 150.
 Rosen, H. R., Ark. Bul. 283.
 Ross, H. E., N. Y. (Cornell) Bul. 589.
 Ross, R. C., Ill. Bul. 404.
 Rothgeb, R. G., Md. Bul. 362.
 Rouse, W. L., Ky. Bul. 347, 351.
 Rozman, David, Mass. Bul. 294, 304.
 Rudd, V. E., N. Dak. Bul. 266.
 Rudolph, B. A., Calif. Bul. 564.
 Ruehe, H. A., Ill. Bul. 389, 407.
 Runnels, H. A., Ohio Bul. 522.
 Rupel, I. W., Wis. Res. Bul. 115.
 Ruprecht, R. W., Fla. Bul. 270.
 Rusk, H. W., Md. Bul. 368.
 Russell, B. A., S. C. Bul. 288.
 Russell, W. C., N. J. Bul. 560.
 Ruttle, M. L., N. Y. State Tech. Bul. 221.

 St. John, J. L., Wash. Bul. 284, 286, 299.
 Sallee, G. A., Minn. Bul. 301.
 Salmon, S. C., Kans. Res. Bul. 35.
 Sanborn, B. G., N. H. Bul. 276, 282.
 Sanborn, C. E., Okla. Bul. 222.
 Sanborn, Ruby, Mass. Bul. 298, 307.
 Sanders, J. T., Okla. Bul. 211.
 Sanderson, Dwight, N. Y. (Cornell) Bul. 555, 559, 608, 614.
 Sands, G. C., Iowa Res. Bul. 175.
 Sater, V. E., Wash. Bul. 303.
 Savage, E. S., N. Y. (Cornell) Bul. 578.
 Saville, R. J., La. Bul. 233.
 Sayre, C. B., N. Y. State Bul. 619.
 Schantz-Hansen, Thorvald, Minn. Bul. 304.
 Schickele, Rainer, Iowa Bul. 319, 320; Res. Bul. 171.
 Schlenker, F. S., R. I. Bul. 242.
 Schmidt, E. H., Md. Bul. 362.
 Schmitt, J. B., N. J. Bul. 576.
 Schoenfeld, W. A., Oreg. Bul. 334.
 Schoenleber, L. H., Minn. Bul. 299.
 Scholl, O. A., Mich. Spec. Bul. 237.
 Scholl, E. E., Okla. Bul. 222.
 Schour, Isaac, Ariz. Tech. Bul. 52.
 Schread, J. C., Conn. (State) Bul. 353.
 Schrumpf, W. E., Maine Bul. 365.
 Schueler, J. E., Md. Bul. 362.
 Schultz, E. S., Maine Bul. 370.
 Schultz, T. W., Iowa Bul. 314, 319, 320; Res. Bul. 161, 171.
 Schuster, C. E., Oreg. Bul. 315.
 Schuster, G. L., Del. Bul. 189.
 Schwardt, H. H., Ark. Bul. 299, 309.
 Scoville, G. P., N. Y. (Cornell) Bul. 605.
 Scrivner, L. H., Wyo. Bul. 201.
 Sears, O. H., Ill. Bul. 394.
 Selby, H. E., Oreg. Bul. 312, 318, 324, 333.
 Sellman, R. L., Md. Bul. 362.
 Setterfield, H. E., Ohio Bul. 545.
 Severin, H. H. P., Calif. Hilgardia, vol. 7, no. 8; vol. 8, no. 1; vol. 8, no. 8; vol. 8, no. 10.
 Severson, Albert, N. Dak. Bul. 263.
 Seymour, A. C., Va. Bul. 291.
 Shands, H. L., Wis. Res. Bul. 116.
 Shands, R. G., Wis. Res. Bul. 116.

 Shaw, J. N., Oreg. Bul. 322, 327.
 Shaw, W. M., Tenn. Bul. 152; Va. Tech. Bul. 54.
 Shealy, A. L., Fla. Bul. 260, 262, 264.
 Shear, G. M., Va. Tech. Bul. 49.
 Shearer, P. S., Iowa Bul. 299.
 Shepherd, Geoffrey, Iowa Bul. 306, 310, 313, 317; Res. Bul. 164.
 Shepperd, J. H., N. Dak. Bul. 263.
 Sherwood, R. M., Tex. Bul. 476, 493.
 Shirky, S. B., Mo. Bul. 328, 340.
 Shoemaker, J. S., Ohio Bul. 528, 541.
 Shuck, A. L., N. Y. State Tech. Bul. 222.
 Shull, W. E., Idaho Res. Bul. 11.
 Sieglinger, J. B., Okla. Bul. 210.
 Sievers, F. J., Mass. Bul. 293, 305.
 Silverman, N. L., Pa. Bul. 291.
 Simms, B. T., Oreg. Bul. 322, 332.
 Simon, E. C., La. Bul. 247.
 Singleton, H. P., Wash. Bul. 278.
 Singleton, W. R., Conn. (State) Bul. 361.
 Sjogren, John, Colo. Tech. Bul. 11.
 Skinner, J. H., Ind. Bul. 371.
 Skinner, J. J., N. C. Bul. 283.
 Skovholt, Oscar, Minn. Bul. 296.
 Slagsvold, P. L., Mont. Bul. 290.
 Slate, G. L., N. Y. State Bul. 625.
 Slate, W. L., Conn. (State) Bul. 347, 357; Conn. (Storrs) Bul. 192, 199.
 Sleeth, Bailey, W. Va. Bul. 257.
 Smith, A. K., Jr., La. Bul. 237.
 Smith, C. W., Nebr. Bul. 291.
 Smith, D. C., Minn. Tech. Bul. 102.
 Smith, D. D., Mo. Res. Bul. 197.
 Smith, F. V., Ind. Bul. 387.
 Smith, G. D., Mo. Res. Bul. 210.
 Smith, G. E. P., Ariz. Bul. 144.
 Smith, G. H., Jr., Nev. Bul. 133.
 Smith, H. P., Tex. Bul. 486.
 Smith, H. S., Calif. Bul. 553.
 Smith, J. B., R. I. Bul. 242, 243.
 Smith, L. H., Ill. Soil Rpt. 54, 55, 56.
 Smith, L. M., Calif. Bul. 562.
 Smith, Lolie, Maine Bul. 371.
 Smith, M. C., Ariz. Tech. Bul. 45, 52.
 Smith, M. E., Ark. Bul. 284, 286.
 Smith, O. J., N. H. Tech. Bul. 54.
 Smith, Ora, N. Y. (Cornell) Bul. 553.
 Smith, R. E., Calif. Bul. 553; Hilgardia, vol. 7, no. 13.
 Smith, R. M., Ark. Bul. 293, 304.
 Smith, R. S., Ill. Soil Rpt. 54, 55, 56.
 Smith, R. W., Jr., Vt. Bul. 363, 364.
 Smith, T. L., La. Bul. 234.
 Smith, T. O., N. H. Bul. 277, 278, 281, 283; Tech. Bul. 59.
 Smock, R. M., Ohio Bul. 517.
 Snell, M. E., Mass. Bul. 297.
 Snell, M. G., La. Bul. 257.
 Snyder, E. B., Nebr. Res. Bul. 68.
 Snyder, W. C., Wis. Bul. 424.
 Soxman, R. C., Miss. Tech. Bul. 21.
 Spaeth, J. N., N. Y. (Cornell) Mem. 169.
 Spaulding, E. H., Conn. (Storrs) Bul. 195.
 Spears, H. D., Ky. Bul. 340.
 Sperry, J. A., Pa. Bul. 296.
 Spitzer, George, Ind. Bul. 385.
 Sprague, H. B., N. J. Bul. 565, 570.
 Spurway, C. H., Mich. Tech. Bul. 132.

- Stadler, L. J., Mo. Res. Bul. 204.
 Stahl, A. L., Fla. Bul. 259, 272.
 Staker, E. V., N. Y. (Cornell) Mem. 149. ,
 Staples, C. H., La. Bul. 238.
 Starch, E. A., Mont. Bul. 278.
 Starr, L. E., Va. Tech. Bul. 48.
 Starring, C. C., Mont. Bul. 292.
 Stearns, L. A., Del. Bul. 181.
 Stephens, J. C., Tex. Bul. 496.
 Stephens, P. H., N. Y. (Cornell) Bul. 562; Okla. Bul. 208.
 Stephenson, R. E., Oreg. Bul. 325.
 Stevens, O. A., N. Dak. Bul. 265, 269.
 Stewart, C. L., Ill. Bul. 399, 404.
 Stewart, F. C., N. Y. State Bul. 633.
 Stewart, Sidney, La. Bul. 238.
 Stickel, F. G., Jr., N. J. Bul. 552.
 Stiles, C. F., Okla. Bul. 222.
 Stitt, R. E., Mass. Bul. 309.
 Stoa, T. E., N. Dak. Bul. 264.
 Stokdyk, E. A., Calif. Bul. 558, 565.
 Storie, R. E., Calif. Bul. 552, 556.
 Stout, A. B., Fla. Bul. 257.
 Stover, H. J., Calif. Bul. 569.
 Strand, A. L., Mont. Bul. 294.
 Straszheim, R. E., Ohio Bul. 530.
 Street, O. E., Conn. (State) Bul. 350, 359.
 Streets, R. B., Ariz. Bul. 148; Tech. Bul. 48.
 Stroman, G. N., N. Mex. Bul. 217.
 Stuart, H. O., R. I. Bul. 238, 244.
 Stuart, N. W., Md. Bul. 370.
 Stuart, W. W., N.Y. (Cornell) Bul. 566.
 Stutts, R. T., N. C. Tech. Bul. 45.
 Sulerud, G. L., Oreg. Bul. 310.
 Sullivan, James, Tex. Bul. 488, 502.
 Suneson, C. A., Nebr. Bul. 233.
 Supplee, W. C., Md. Bul. 350.
 Sure, Barnett, Ark. Bul. 234, 286.
 Sutton, T. S., Ohio Bul. 545.
 Swanback, T. R., Conn. (State) Bul. 350, 359.
 Swanson, A. F., Kans. Bul. 265, 266.
 Swartz, V. W., Wash. Bul. 282.

 Tait, G. M., N. Y. (Cornell) Bul. 572.
 Takahashi, Makoto, Hawaii Bul. 72.
 Talbert, T. J., Mo. Res. Bul. 183.
 Tapley, W. T., N. Y. State [Horticultural monograph] 1934
 Tate, L. B., N. Y. (Cornell) Bul. 595.
 Tavernetti, J. R., Calif. Bul. 584.
 Tayloe, W. L., Mo. Res. Bul. 183.
 Taylor, E. A., N. Y. (Cornell) Bul. 583.
 Taylor, J. B., S. Dak. Bul. 233.
 Taylor, L. W., Calif. Bul. 550.
 Taylor, M. W., N. J. Bul. 560.
 Taylor, W. P., Ariz. Tech. Bul. 49.
 Tennant, J. L., R. I. Bul. 241.
 Terrell, W. G., Ky. Bul. 340.
 Tetreau, E. D., Calif. Bul. 563.
 Thaden, J. F., Mich. Spec. Bul. 236.
 Thatcher, L. E., Ohio Bul. 540, 543.
 Thiessen, E. J., Wyo. Bul. 198.
 Thomas, F. L., Tex. Bul. 475.
 Thomas, H. E., Calif. Bul. 586; N. Y. (Cornell) Bul. 556, 557.
 Thomas, H. L., Iowa Bul. 323.
 Thomas, R. P., Md. Bul. 362.

 Thomas, W. P., Utah Bul. 244.
 Thompson, H. C., N. Y. (Cornell) Bul. 580, 602.
 Thompson, M. J., Minn. Bul. 299.
 Thomsen, F. L., Mo. Bul. 329.
 Thornton, B. J., Colo. Bul. 403.
 Thornton, S. F., Ind. Bul. 384.
 Threlkeld, W. L., Va. Tech. Bul. 52.
 Thrun, F. M., Mich. Spec. Bul. 229.
 Thurow, M. B., N. Y. (Cornell) Bul. 617.
 Thurston, H. W., Jr., Pa. Bul. 311. ,
 Thurston, L. M., W. Va. Bul. 255.
 Tilford, P. E., Ohio Bul. 520.
 Tims, E. C., La. Bul. 256.
 Tinley, J. M., Calif. Bul. 559.
 Tobiska, J. W., Colo. Tech. Bul. 4.
 Todd, F. E., Calif. Bul. 554, 555.
 Toenjes, Walter, Mich. Spec. Bul. 230.
 Toews, J. L., Idaho Bul. 199.
 Tolley, H. R., Calif. Bul. 553.
 Tomey, L. F., Pa. Bul. 296.
 Tomhave, A. E., Del. Bul. 183.
 Tough, Rosalind, Wis. Res. Bul. 121.
 Townsend, G. R., N. Y. (Cornell) Mem. 153.
 Townsend, T. H., N. Y. (Cornell) Bul. 608.
 Toy, L. R., Fla. Bul. 272.
 Tracy, P. H., Ill. Bul. 389, 407.
 Treichler, Ray, Tex. Bul. 477, 495.
 Tretsven, J. O., Mont. Bul. 282; Wash. Bul. 287.
 Trowbridge, E. A., Mo. Bul. 325.
 Tucker, C. M., Mo. Res. Bul. 184.
 Tucker, H. H., N. J. Bul. 572.
 Tucker, L. R., Idaho Bul. 211; Ill. Bul. 393.
 Tukey, H. B., N. Y. State Bul. 649; Tech. Bul. 218.
 Tullis, E. C., Ark. Bul. 295.
 Tully, W. C., S. Dak. Bul. 284, 287.
 Tunnidiff, E. A., Mont. Bul. 285.
 Turner, C. W., Mo. Bul. 339; Res. Bul. 182, 194, 196, 206, 207, 211.
 Turner, J. D., Ky. Bul. 340.
 Tuttle, A. R., Ohio Bul. 530, 542.
 Tyler, Jocelyn, Calif. Hilgardia, vol. 7, no. 10.
 Tysdal, H. M., Nebr. Res. Bul. 76.

 Udall, D. H., N. Y. (Cornell) Bul. 579.
 Ulrey, Orion, Mich. Tech. Bul. 139.
 Underhill, G. W., Va. Bul. 294.
 Underwood, F. O., N. Y. (Cornell) Bul. 567, 568, 611.
 Upp, C. W., La. Bul. 242, 243, 255.

 Vail, C. E., Colo. Tech. Bul. 4.
 Valleau, W. D., Ky. Bul. 339, 341, 353.
 Van Es, Leunis, Nebr. Bul. 290.
 Van Eseltine, G. P., N. Y. State Tech. Bul. 208. 214; [Horticultural monograph] 1934.
 Van Haltern, Frank, Ga. Bul. 175.
 Van Volkenberg, H. L., P. R. Bul. 36.
 Vass, A. F., Wyo. Bul. 197.
 Vaughan, L. M., N. Y. (Cornell) Bul. 554.
 Vawter, L. R., Nev. Bul. 132.
 Veatch, J. O., Mich. Spec. Bul. 231, 257.
 Veihmeyer, F. J., Calif. Bul. 573.
 Venstrom, Cruz, Nev. Bul. 130, 134.
 Vernon, J. J., Va. Bul. 289.
 Vestal, E. F., Iowa Res. Bul. 168.
 Vickery, H. B., Conn. (State) Bul. 352.
 Vinke, Louis, Mont. Bul. 275, 284.

- Vogel, H. A., Idaho Bul. 207, 208.
 Vogt, Karl, N. Y. (Cornell) Bul. 596.
 Voorhies, E. C., Calif. Bul. 554, 555.
 Vorhies, C. T., Ariz. Tech. Bul. 49.

 Wait, Bernice, Mass. Bul. 310.
 Waite, R. H., Md. Bul. 359, 367.
 Waite, W. C., Minn. Bul. 311.
 Wakeland, Claude, Idaho Bul. 200.
 Walker, A. L., N. Mex. Bul. 215, 224.
 Walker, D. J., Ark. Bul. 284, 286.
 Walker, F. W., Fla. Bul. 258.
 Walker, G. L., N. H. Tech. Bul. 54.
 Walker, G. P., Ind. Bul. 386.
 Walker, J. C., Wis. Bul. 424.
 Walker, L. S., Vt. Bul. 351, 361, 366, 372, 381, 385.
 Walker, R. H., Iowa Bul. 298, 305.
 Walker, W. P., Md. Bul. 352, 357.
 Wallace, Q. W., Iowa Bul. 299.
 Waller, A. G., N. J. Bul. 555, 575.
 Wallrabenstein, P. P., Ohio Bul. 530, 542.
 Walter, D. H., Pa. Bul. 309.
 Wann, J. L., Calif. Bul. 581.
 Wanser, H. M., Wash. Bul. 281.
 Ward, J. C., Colo. Tech. Bul. 6.
 Ware, J. O., Ark. Bul. 294, 300, 308.
 Warren, D. C., Kans. Tech. Bul. 37.
 Warren, T. R., Idaho Bul. 206.
 Washburn, R. G., Ohio Bul. 518.
 Wasson, C. R., N. Y. (Cornell) Bul. 555.
 Watkins, D. E., Md. Bul. 356.
 Watkins, W. E., N. Mex. Bul. 212.
 Watts, R. L., Pa. Bul. 293, 308.
 Watts, V. M., Ark. Bul. 288, 292, 310.
 Weaver, F. P., Pa. Bul. 297, 305, 309.
 Webster, R. L., Wash. Bul. 293.
 Weeks, David, Calif. Bul. 572.
 Weinard, F. F., Ill. Bul. 400, 409.
 Weinberger, J. H., Md. Bul. 366.
 Weis, Adelia, Mo. Res. Bul. 205.
 Weiser, V. L., Vt. Bul. 356, 371.
 Welch, R. C., Pa. Bul. 312.
 Welsh, Claribel, Md. Bul. 360.
 Wentworth, S. W., N. H. Tech. Bul. 55.
 Werner, H. O., Nebr. Bul. 278; Res. Bul. 75.
 Westcott, Cynthia, N. Y. (Cornell) Mem. 153.
 Westgate, W. A., N. H. Tech. Bul. 58.
 Westveld, R. H., Mich. Tech. Bul. 135.
 Whalin, O. L., Ill. Bul. 404.
 Wheeler, E. J., Mich. Spec. Bul. 234, 246.
 Whelpton, P. K., Iowa Res. Bul. 177.
 Whetten, N. L., Conn. (Storrs) Bul. 194.
 Whitacre, Jessie, Tex. Bul. 489, 491.
 Whitcomb, W. O., Mont. Bul. 270.
 White, G. C., Conn. (Storrs) Bul. 185, 197, 198.
 Whitehead, F. E., Okla. Bul. 218.
 Whittemore, Margaret, R. I. Bul. 239.
 Wiancko, A. T., Ind. Bul. 386.
 Wieslander, A. E., Calif. Bul. 572.
 Wiggans, R. G., N. Y. (Cornell) Bul. 601; Mem. 152.
 Wilber, C. P., N. J. Bul. 552.
 Wilbur, J. W., Ind. Bul. 372, 373.
 Wilcox, R. H., Ill. Bul. 390.
 Wildon, C. E., Mich. Spec. Bul. 228 (supp.).
 Wilkins, F. S., Iowa Bul. 309; Res. Bul. 162.
 Willard, C. J., Ohio Bul. 540.

 Willard, H. S., Wyo. Bul. 199, 202.
 Willard, R. E., Wash. Bul. 288, 297, 300, 301.
 Williams, B. O., S. C. Bul. 296.
 Williams, C. B., N. C. Bul. 283, 285, 292, 293.
 Williams, C. F., N. C. Bul. 291.
 Williams, C. G., Ohio Bul. 516, 532.
 Williams, H. H., N. Y. (Cornell) Bul. 593.
 Williams, N. W., N. C. Bul. 290.
 Williams, R. H., Tex. Bul. 492.
 Williams, S. W., Vt. Bul. 376.
 Willis, L. G., N. C. Bul. 299; Tech. Bul. 47.
 Willis, R. L., N. J. Bul. 556, 577.
 Willis, W. H., Iowa Res. Bul. 173.
 Willman, J. P., N. Y. (Cornell) Bul. 603.
 Wills, J. E., Ill. Bul. 395.
 Willson, E. A., N. Dak. Bul. 271.
 Wilsie, C. P., Hawaii Bul. 72.
 Wilson, A. L., N. Y. (Cornell) Mem. 156.
 Wilson, B. D., N. Y. (Cornell) Mem. 146, 148, 149.
 Wilson, E. E., Calif. Hilgardia, vol. 8, no. 3.
 Wilson, J. D., Ohio Bul. 520, 522.
 Wilson, J. K., N. Y. (Cornell) Mem. 148, 162.
 Wilson, James W., S. Dak. Bul. 278.
 Wilson, John W., Fla. Bul. 271.
 Wilson, Maud, Oreg. Bul. 320.
 Wilster, G. H., Oreg. Bul. 326, 331.
 Winant, H. B., Md. Bul. 362.
 Wing, H. H., N. Y. (Cornell) Bul. 576.
 Wingard, S. A., Va. Tech. Bul. 51.
 Wingate, H. T., Ala. Bul. 240; Va. Bul. 289.
 Winkler, A. J., Calif. Hilgardia, vol. 8, no. 6.
 Winter, J. D., Minn. Bul. 305.
 Winters, L. M., Minn. Tech. Bul. 94.
 Winther, Helmuth, N. Y. (Cornell) Bul. 589.
 Winton, Berley, Mo. Bul. 329.
 Withrow, R. B., Ind. Bul. 380.
 Wolfe, H. S., Fla. Bul. 272.
 Woodroof, J. G., Ga. Bul. 176.
 Woodroof, N. C., Ga. Bul. 178.
 Woodrow, A. W., N. Y. (Cornell) Mem. 147.
 Woods, J. B., Ark. Bul. 287.
 Woodward, G. T., Nev. Bul. 132.
 Woodward, J. H., S. C. Bul. 291.
 Woodworth, H. C., N. H. Bul. 275, 279.
 Wooley, J. C., Mo. Res. Bul. 218.
 Work, S. H., N. Y. (Cornell) Bul. 578.
 Worthley, H. N., Pa. Bul. 284, 285, 311.
 Wright, Turner, S. Dak. Bul. 278, 283.
 Wyche, R. H., Tex. Bul. 485.
 Wyman, Donald, N. Y. (Cornell) Bul. 618.

 Yale, M. W., N. Y. State Bul. 630; Tech. Bul. 207, 213.
 Yeager, A. F., N. Dak. Bul. 267, 276.
 York, Gus, Fla. Bul. 264.
 Young, A. W., Iowa Res. Bul. 157.
 Young, E. C., Ind. Bul. 378.
 Young, G. E., Ind. Bul. 376.
 Young, H. C., Okla. Bul. 222.
 Young, S. C., N. Mex. Bul. 218.
 Young, V. H., Ark. Bul. 308.
 Youngstrom, C. O., Idaho Bul. 210.

 Zahnley, J. W., Kans. Bul. 267, 269.
 Zeller, S. M., Oreg. Bul. 319.
 Zook, L. L., Nebr. Bul. 279.

INDEX OF SUBJECTS

Abortion—

in cattle, Conn. (Storrs) Bul. 185; Oreg. Bul. 332; Vt. Bul. 382; W. Va. Bul. 259; Wyo. Bul. 201.

in cattle and swine, relation to undulant fever in man, Va. Tech. Bul. 48.

in livestock, and brucellosis, Mich. Mem. 1.

Accounts—

cost on New York farms, N. Y. (Cornell) Bul. 554.

farm, analysis, Iowa Res. Bul. 160.

Acetylmethylcarbinol and diacetyl, in butter cultures, Iowa Res. Bul. 155.

Acidosis of pregnant ewes, Ky. Bul. 354.

Acrosternum hilaris, Va. Bul. 294.

Actinomyces necrophorus, Mont. Bul. 285.

Actinomyces scabies, N. Y. (Cornell) Bul. 581.

Adelges abietis, N. Y. State Tech. Bul. 225.

Adirondack region, forest-type studies, N. Y. (Cornell) Mem. 165.

Agar disc method, Iowa Bul. 300.

Agencies, rural social, trends, Ohio Bul. 529.

Agglutination reactions, in diagnosis of abortion, Conn. (Storrs) Bul. 185.

Agricultural credit—

use for farms, Ky. Bul. 343.

See also Mortgages.

Agricultural finance. See Agricultural credit; Banks; Taxation.

Agricultural land classification, Mich. Spec. Bul. 231.

Agricultural marketing. See Marketing.

Agricultural production and agricultural recovery, Iowa Bul. 314.

Agricultural products—

cost of production, Okla. Bul. 208.

perishable, consumption, in Albany, N. Y. (Cornell) Bul. 586.

perishable, marketing and distribution, N. Y. (Cornell) Bul. 620.

perishable, marketing in Albany, N. Y. (Cornell) Bul. 585.

prices. See Prices, agricultural products.

prices and costs, Mich. Tech. Bul. 139.

Agricultural recovery—

national planning for, Iowa Bul. 313.

prospects for, Iowa Bul. 310, 311, 312, 313, 314, 315, 316, 317.

Agriculture—

analysis, on Milk River project, Mont. Bul. 290.

economic plans in agricultural recovery, Iowa Bul. 313, 316.

effect of economic changes, Mo. Bul. 323.

effects of inflation and deflation, Nebr. Res. Bul. 71.

Ohio, Ohio Bul. 526.

Pennsylvania, and price movements, Pa. Bul. 309.

Agriculture—Continued.

statistics, Ohio Bul. 526, 530, 542.

Sumter County, economic study, S. C. Bul. 288.

trends, 1900-1930, Wash. Bul. 300.

Agrilus sinuatus, N. Y. State Bul. 648.

Agrostis tenuis, utilization of nutrients by, N. J. Bul. 570.

Albany—

consumption of perishable farm products, N. Y. (Cornell) Bul. 586.

marketing of perishable farm products, N. Y. (Cornell) Bul. 585.

Albino mouse, development of mammary gland, Mo. Res. Bul. 206.

Alcohol-gasoline engine fuels, Idaho Bul. 204.

Alcohol, industrial, byproduct stock feed, Md. Bul. 349.

Alfalfa—

and grain for fattening pigs, Mont. Bul. 284.

and timothy hay for dairy cows, Ohio Bul. 538.

as source of protein and phosphorus requirement of dairy cattle, Mich. Tech. Bul. 134.

at Archer field station, Wyo. Bul. 195.

culture, Mo. Bul. 326; N. C. Bul. 300; Ohio Bul. 540.

curing, effect on carotene and vitamin A content, N. J. Bul. 560.

growers, approved practices, N. C. Bul. 300.

harvesting with windrow pick-up baler, Iowa Bul. 322.

hay, effect of manure and phosphorus fertilizers, Utah Bul. 247.

hay, for milk production, Oreg. Bul. 328.

hay, vitamin content, Colo. Tech. Bul. 4.

inoculation and liming on Grundy silt loam, Iowa Bul. 305.

lamb feeding, Iowa Bul. 299.

leaf hopper injury and time of cutting, Ky. Bul. 348.

leaf meal, nutritive value for chicks, N. Mex. Bul. 221.

meal, brown for ruminants, Calif. Bul. 575.

pasture, for yearling heifers, Nebr. Bul. 281.

production, Ohio Bul. 540.

red clover and sweetclover, black stem, Ky. Bul. 339.

seed screenings, for cows, Idaho Bul. 206.

strains and varieties, adaptability, Idaho Bul. 199.

varieties, Pa. Bul. 295.

weevil, control, Colo. Bul. 399.

weevil, life history and control, Calif. Bul. 567.

wilt and cold resistance, self-fertilized lines, Nebr. Res. Bul. 76.

wilt, susceptibility to, Nebr. Res. Bul. 66.

with corn and fishmeal, for hogs, S. C. Bul. 289.

Alkali soils, reclamation, Calif. Hilgardia, vol. 8, no. 5.

- Alkaline calcareous soils, available phosphorus estimation, Colo. Tech. Bul. 2.
- Alkaline waters, effect on animals, Okla. Bul. 217.
- Allegheny County, rural churches, N. Y. (Cornell) Bul. 587.
- Alternaria blight, ginseng, Ohio Bul. 522.
- Ammonia, on cotton, effect on fruiting and organic constituents, Ga. Bul. 182.
- Ammonium compounds, effect on soil and crop, N. J. Bul. 571.
- Anemia and vitamin deficiency, Ark. Bul. 286.
- Angoumois grain moth, as host of *Trichogramma*, Conn. (State) Bul. 353.
- Animals—
- effect of saline and alkaline waters on, Okla. Bul. 217.
 - growth and development, Mo. Res. Bul. 180, 189, 190, 191, 192, 193, 208, 209, 220.
 - nutrition, respiration calorimeter, Pa. Bul. 302.
 - nutrition tests, alcohol byproducts, Md. Bul. 349.
- Anthonomus grandis*, Okla. Bul. 222; Tex. Bul. 475.
- Anthraxnose, dewberries, spraying for, N. J. Bul. 574.
- Aonidiella aurantii*, Calif. Bul. 583.
- Aonidiella aurantii* and *A. citrina*, comparison, Calif. Hilgardia, vol. 7, no. 11.
- Aonidiella citrina*, internal anatomy, Calif. Hilgardia, vol. 7, no. 11.
- Aphicidal properties, derris and cube root, N. J. Bul. 581.
- Aphids—
- black cherry aphid, N. Y. State Bul. 637.
 - nicotine supplements for, spray value, N. Y. State Tech. Bul. 210.
 - rosy, tar distillate emulsion in control, N. Y. State Bul. 636.
 - spruce gall, N. Y. State Tech. Bul. 225.
 - strawberry leaf louse, Oreg. Bul. 319.
 - woolly apple aphid, Tenn. Bul. 151.
- Apple industry, trends, Wash. Bul. 277.
- Apple leaves, photosynthesis, N. Y. (Cornell) Bul. 577.
- Apple maggot—
- control, N. Y. State Bul. 644.
 - fly, morphology of the digestive tract, N. Y. State Tech. Bul. 215.
 - viability of eggs and larvae, N. Y. State Tech. Bul. 206.
- Apple orchards—
- nitrogenous fertilizers, N. Y. State Bul. 623.
 - spraying vs. dusting, Ohio Bul. 527.
 - studies in economics, N. H. Bul. 279.
- Apple scab—
- lime-sulfur in control, N. Y. State Bul. 624.
 - spraying and dusting for, Maine Bul. 368.
 - spraying methods, Mich. Spec. Bul. 230.
- Apple seedlings, aneuploid, chromosome numbers in, N. Y. State Tech. Bul. 209.
- Apple trees—
- Baldwin, fertilizer responses on acid soils, N. Y. State Bul. 646.
 - Baldwin, winter injury, relation to preceding crop and fertilizer treatment, N. Y. State Bul. 647.
 - crown gall and hairy root, N. Y. State Bul. 638.
- Apple trees—Continued.
- Delicious, growth status, standard for judging, N. J. Bul. 559.
 - dormant sprays, Oreg. Bul. 321.
 - filler, ringing, Pa. Bul. 290.
 - fire-blight studies, Ark. Bul. 283; Calif. Bul. 586; N. Y. (Cornell) Bul. 557.
 - freezing injury, N. Y. (Cornell) Bul. 556.
 - grafting, effect of scion on root development, N. Y. State Tech. Bul. 218.
 - nitrogen for, Wis. Bul. 427.
 - spraying for codling moth, N. Y. State Bul. 627.
 - Stayman and Baldwin, effect of temperature on growth and composition, N. J. Bul. 566.
- Apples—
- arsenic injury, Wash. Pop. Bul. 149.
 - ash constituents in growing season, Ohio Bul. 519.
 - black pox and measles, W. Va. Bul. 260.
 - blue-mold, decay, investigation of control methods, Wash. Bul. 304.
 - cedar-apple rust on, Iowa Res. Bul. 166.
 - codling moth control and arsenic deposit, Wash. Bul. 293.
 - color, factors affecting, Md. Bul. 353.
 - cost of production, N. J. Bul. 555.
 - cost of production, and returns, N. Y. (Cornell) Bul. 565.
 - immature, shedding, Mo. Res. Bul. 201.
 - lead residues, method of determination, Pa. Bul. 304.
 - lenticel infection by *Penicillium expansum*, Wash. Bul. 298.
 - marketing, Del. Bul. 185.
 - measles, W. Va. Bul. 260.
 - pollination and fruit setting, N. H. Bul. 274.
 - refrigeration of packages, Ill. Bul. 410.
 - shipping out of state, Mass. Bul. 299.
 - sooty blotch disease, Va. Tech. Bul. 50.
 - species, crabapples, N. Y. State Tech. Bul. 208, 214.
 - spray residue, relation to schedules, Ind. Bul. 381.
 - spray residue removal, Md. Bul. 368; N. Y. (Cornell) Bul. 604; Oreg. Bul. 317; Wash. Bul. 286.
 - spray residues, method for determination, Pa. Bul. 304.
 - spraying, Mich. Spec. Bul. 230.
 - spraying and dusting, cost and returns, Pa. Bul. 311.
 - spraying and dusting for scab, Maine Bul. 368.
 - storage, value of ice in, Ind. Bul. 379.
- Apricots—
- pruning, experiments, Calif. Bul. 574.
 - varieties, Utah Bul. 251.
- Aquatic diptera, N. Y. (Cornell) Mem. 164.
- Arkansas agricultural experiment station—
- report, Ark. Bul. 297, 312.
 - summary of research, Ark. Bul. 297.
- Arkansas Valley soils, nitric nitrogen in, Colo. Tech. Bul. 6.
- Arrow grass, poisonous to sheep, Wyo. Bul. 193.
- Arsenic—
- and codling moth resistance, Mo. Res. Bul. 202.
 - deposit, and codling moth control, Wash. Bul. 293.

- Arsenic—Continued.
 in grasshopper poisoning, effect on birds, Okla. Bul. 218.
 injury of apples, Wash. Pop. Bul. 149.
 spray residue removal. *See* Spray residue removal.
- Arsenical compounds—
 feeding white rats, Mo. Res. Bul. 183.
 in control of weeds, Calif. Hilgardia, vol. 7, no. 9; vol. 8, no. 4.
- Arsenious oxide and lead residues, on apples, and spray schedules, Ind. Bul. 381.
- Artichoke silage, for ruminants, Calif. Bul. 575.
- Ascaris lumbricoides*, S. Dak. Bul. 283.
- Asparagus—
 caterpillar, life history and control, Fla. Bul. 271.
 effect of cutting, Ill. Bul. 401.
- Aster yellows—
 infection of flowering plants, Calif. Hilgardia, vol. 8, no. 8.
 transmission to potato by *Cicadula divisa*, Calif. Hilgardia, vol. 8, no. 10.
 virus, experiments, Calif. Hilgardia, vol. 8, no. 10.
- Atlas sorgo, feeding lambs, Kans. Bul. 264.
- Avian typhoid. *See* Fowl typhoid.
- Avitaminosis—
 A and nerve degeneration in white rat, Ohio Bul. 545.
 biochemistry and pathology, Ark. Bul. 286.
- Avocados—
 composition, changes in, relation to maturity, Fla. Bul. 259.
 culture, Fla. Bul. 272.
 diseases, Calif. Bul. 585.
 pollination, Fla. Bul. 257.
 production, Fla. Bul. 272.
- Azotobacter, in peat soils, N. Y. (Cornell) Mem. 148.
- Bacillary white diarrhea. *See* Pullorum disease.
- Bacillus amylovorus*, Calif. Bul. 586; N. Y. (Cornell) Bul. 557.
See also *Erwinia amylovora*.
- Bacillus nigrificans*, cause of blackening in pickles, Mich. Tech. Bul. 140.
- Back to the land movement, Mo. Bul. 323.
- Bacon production, effect of "seedy cut", Wis. Res. Bul. 118.
- Bacteria, thermophilic, in pasteurized milk, N. Y. State Bul. 630.
- Bacterial canker, stone fruits, Calif. Hilgardia, vol. 8, no. 3.
- Bactericides, composition, Conn. (State) Bul. 346.
- Bacteriological incubators, temperature variations in, N. Y. State Tech. Bul. 213.
- Bacteriosis, walnut, Calif. Bul. 564.
- Baits—
 for grasshoppers, Colo. Tech. Bul. 7.
 for oriental fruit moth, Pa. Bul. 301.
- Baking, study of egg-white foaming, Colo. Tech. Bul. 9.
- Baler, windrow pick-up, in harvesting alfalfa, Iowa Bul. 322.
- Bang's abortion disease. *See* Abortion.
- Banks, indicators of condition, Ark. Bul. 298.
- Barley—
 production, N. Dak. Bul. 264.
 smooth-awned, stripe resistance and yield, Wis. Res. Bul. 116.
 smuts, studies, N. Y. State Tech. Bul. 221.
 stripe, study of organism causing, Minn. Tech. Bul. 95.
 varieties, N. Dak. Bul. 264.
- Basiporum gallurum*, resistance of dent corn to, Iowa Res. Bul. 167.
- Basswood, seed, dormancy, N. Y. (Cornell) Mem. 169.
- Bayo beans, composition, N. Mex. Bul. 213.
- Bean thrips, biology, Calif. Hilgardia, vol. 7, no. 12.
- Beans—
 bayo, composition, N. Mex. Bul. 213.
 development of cotyledonary buds, N. Y. (Cornell) Mem. 167.
 investigations, La. Bul. 245.
 lima, bush, fruiting habit, Ohio Bul. 535.
 lima, thrasher and mechanical injuries, Calif. Bul. 580.
Lygus spp. on, Idaho Res. Bul. 11.
 pinto, chemical composition, N. Mex. Bul. 213.
 rust-resistant, development by hybridization, Va. Tech. Bul. 51.
 stored, weevils in, Tenn. Bul. 150.
- Bee industry, economic aspects, Calif. Bul. 555.
- Beef—
 cattle. *See* Cattle, beef.
 from yearling cattle, Mo. Res. Bul. 186.
 production, Fla. Bul. 260; Minn. Bul. 301.
- Bees—
 comparative value of package and established colonies for fruit pollination, N. Y. (Cornell) Mem. 147.
 industry, Calif. Bul. 555.
- Beet leaf hopper, field observations, Calif. Hilgardia, vol. 7, no. 8.
- Beets—
 garden, optimum soil-nitrate levels for, R. I. Bul. 242.
 seed stalk development, N. Y. (Cornell) Mem. 154.
 sugar. *See* Sugar beets.
 table. *See* Beets, garden.
- Bent grass, Colonial. *See* Colonial bent grass.
- Berks shale soil. *See* Soils.
- Berrien County, land use for fruit production, Mich. Spec. Bul. 257.
- Beta vulgaris*, seed stalk development, N. Y. (Cornell) Mem. 154.
- Bin method, feed mixing, Idaho Bul. 203.
- Bindweed, control, Kans. Bul. 269; Nebr. Bul. 287.
- Birch leaf-mining sawfly, Conn. (State) Bul. 348.
- Birds—
 effect of arsenic in grasshopper poisoning on, Okla. Bul. 218.
 gallinaceous, yeast-like fungi in disorders, Conn. (Storrs) Bul. 188.
 game, artificial incubation, N. Y. (Cornell) Bul. 616.
 of West Virginia, checklist, W. Va. Bul. 258.
 winter, attracting to home grounds, N. J. Bul. 553.
See also Pheasants; Quails; Sparrows.

- Biscuit making qualities, Maryland flour, Md. Bul. 360.
- Black cherry aphid, tar distillate emulsions in control, N. Y. State Bul. 637.
- Black pox, apples, W. Va. Bul. 260.
- Blackberries and dewberries, rosette disease, La. Bul. 250.
- Blackberry mites, control, Wash. Bul. 279.
- Blackleg, potatoes, isolated tuber-unit seed plats for control, Maine Bul. 370.
- Blackstem of alfalfa, red clover and sweetclover, Ky. Bul. 339.
- Blood—
avian, studies, N. C. Tech. Bul. 44.
flour, for calves, Md. Bul. 354.
- Blue mold decay of apples, Wash. Bul. 298, 304.
- Blueberries—
experiments, Wash. Bul. 276.
fertilizer and tillage, N. J. Bul. 558.
highbush, culture, Mich. Spec. Bul. 252.
- Bluegrass, Kentucky, utilization of nutrients by, N. J. Bul. 570.
- Bluestem pastures, burning, Kans. Tech. Bul. 38.
- Bluestem irrigation district, potato experiments, N. Mex. Bul. 218.
- Bollweevil—
history and control, Okla. Bul. 222.
ingestion of poison, Tex. Bul. 475.
- Bone, ground, analyses, N. J. Bul. 551, 561, 582.
- Bordeaux mixture, injurious to ginseng, Ohio Bul. 522.
- Borers, wood, attacking trees, Mich. Spec. Bul. 238.
- Bottom rot of lettuce, N. Y. (Cornell) Mem. 158.
- Bovine infectious abortion. *See* Abortion.
- Bovine infectious mastitis. *See* Mastitis.
- Boys and girls, on farms, income, savings, and work, N. Y. (Cornell) Bul. 560.
- Brand canker of rose, N. Y. (Cornell) Mem. 153.
- Bread—
making qualities, hard wheat flour, effect of storage, Wyo. Bul. 198.
molds, Minn. Bul. 296.
- Brine, ropy, in cucumber fermentation, Mich. Tech. Bul. 140.
- Bromthymol blue test in diagnosis of mastitis, Conn. (Storrs) Bul. 184.
- Brooding, confinement, effect on growth and egg production, Ky. Bul. 346.
- Broome County, social and economic areas, N. Y. (Cornell) Bul. 559.
- Brucella abortus*, infection, control and eradication, W. Va. Bul. 259.
- Brucella*, chemical separation of cellular constituents, Mich. Tech. Bul. 137.
- Brucellosis. *See* Brucellosis.
- Brucellosis—
in cattle and swine, relation to undulant fever in man, Va. Tech. Bul. 48.
public health problem, Mich. Mem. 1.
- Budding, pecan, storage of wood, Tex. Bul. 478.
- Burgundy mixture, formulae and effect on plants, N. H. Tech. Bul. 56.
- Butter—
and buttermaking, chemistry of, Iowa Res. Bul. 175.
bacteriology, Iowa Res. Bul. 159.
churns, Iowa Bul. 300; Res. Bul. 159.
consumption in Minneapolis, Minn. Bul. 311.
- Butter—Continued.
cultures, relationship of acetylmethylcarbinol and diacetyl to, Iowa Res. Bul. 155.
effect of time element in marketing on quality of cream, Ind. Bul. 383.
effects of methods of storing and cooling cream, Oreg. Bul. 326.
lipolytic bacteria in, Iowa Res. Bul. 169.
unsalted, cheese-like flavors in, Minn. Tech. Bul. 97.
vitamin A potency, and vitamin A in the feed of cows, Tex. Bul. 495.
- Butterfat—
market, sources, Ohio Bul. 523.
percentage, inheritance in Holstein-Friesian cattle, N. J. Bul. 572.
production, costs, Oreg. Bul. 318.
production, cows, effect of season on, Nev. Bul. 131.
- Buttermilk—
cultured, skim milk for, Ala. Bul. 239.
fatty material in, and testing methods, Iowa Res. Bul. 175.
- Buying. *See* Purchasing.
- Cabbage—
characters, heredity, Del. Bul. 180.
Copenhagen, breeding and description, La. Bul. 260.
experiments with ammonium compounds, N. J. Bul. 571.
varieties, Mich. Spec. Bul. 249.
- Cake and biscuit making qualities, Maryland flour, Md. Bul. 360.
- Calcareous materials in poultry feeds, metabolism, S. Dak. Bul. 287.
- Calcareous soils. *See* Soils, calcareous.
- Calcium—
and phosphorus assimilation, range cattle, N. Mex. Bul. 214.
deficiency, relation to photosynthesis, protein synthesis, and translocation, Mich. Tech. Bul. 141.
deficient roughages, effect on cows, Fla. Bul. 262.
in poultry feeding, S. Dak. Bul. 287.
on tobacco, Conn. (State) Bul. 350.
- Calcium silicate, conservation in soil, Tenn. Bul. 152; Va. Tech. Bul. 54.
- Calorimeter, respiration, Pa. Bul. 302.
- Calves—
beef, feeding grain on pasture before weaning, La. Bul. 249.
dairy, grinding grains for, Ind. Bul. 373.
dairy, limited milk feeding, S. C. Bul. 293.
dairy, vitamin D in nutrition, Wis. Res. Bul. 115.
feeding, antirachitic ration, Pa. Bul. 291.
rickets in, Pa. Bul. 291; Wis. Res. Bul. 115.
skim milk powder, blood flour and fishmeal in grain rations, Md. Bul. 354.
- Candling, appearance of eggs, Calif. Bul. 561.
- Cane molasses. *See* Molasses, cane.
- Canker—
bacterial, stone fruits, Calif. Hilgardia, vol. 8, no. 3.
brand, rose, N. Y. (Cornell) Mem. 153.
European, on black walnut, W. Va. Bul. 261.
roses, N. Y. (Cornell) Mem. 153.

- Canned and cold pack cherries, production, Oreg. Bul. 310.
- Canned carrots, vitamin content, Mont. Bul. 276.
- Cantaloupes, downy mildew, spraying, Ga. Bul. 175.
- Capons and caponizing, N. C. Bul. 290.
- Caproic acid, toxicity to mosquito larvae, N. H. Tech. Bul. 58.
- Capsanthin, in eggs, and pimiento feeding, Ga. Bul. 183.
- Carbohydrate changes in shelled peas, N. Y. State Bul. 622.
- Carbohydrate content—
 of maple trees, Vt. Bul. 358.
 of onions, N. Y. (Cornell) Mem. 156.
- Carnations, use of old soil in growing, Ill. Bul. 400.
- Carotene content of alfalfa, effect of curing, N. J. Bul. 560.
- Carpenter worm, biology and control, N. Dak. Bul. 278.
- Carpocapsa pomonella*, Idaho Bul. 200; Mich. Spec. Bul. 230; Mo. Bul. 334; Mo. Res. Bul. 202; N. Y. State Bul. 627; Pa. Bul. 285; S. C. Bul. 295; Wash. Bul. 293.
- Carrots—
 color, factors affecting, La. Bul. 251.
 physiological and chemical changes during growth and storage, N. Y. (Cornell) Mem. 161.
 production and marketing, La. Bul. 251.
 vitamin content, effect of storage and canning, Mont. Bul. 276.
- Catechol-tannins and browning in peaches, N. Y. State Tech. Bul. 219.
- Cats, mammary gland development, Mo. Res. Bul. 207.
- Cattle—
 abortion in. *See* Abortion in cattle.
 beef, feeders, purchase and fattening, Minn. Bul. 300.
 beef, feeding, Ga. Bul. 184.
 beef, feeding experiments, Wash. Bul. 302.
 beef, management, Fla. Bul. 260.
 beef, production, Ga. Bul. 184; La. Bul. 244; Minn. Bul. 301.
 breeding, linebreeding, Iowa Bul. 301.
 cost of marketing, Va. Bul. 288.
 dairy, abortion-free herds, maintenance of, Oreg. Bul. 332.
 dairy, and pasture yields. Wash. Bul. 295.
 dairy, breeding for production, N. Y. State Bul. 645.
 dairy, Cornell University herd, N. Y. (Cornell) Bul. 576.
 dairy, cottonseed meal feeding, N. Mex. Bul. 226.
 dairy, dry rations and lactation, reproduction and growth, Oreg. Bul. 329.
 dairy, energy metabolism, and age curves of creatinine and urinary nitrogen coefficients, Mo. Res. Bul. 191.
 dairy, feed consumption during growth, Mo. Bul. 333.
 dairy, feeds for, Mont. Bul. 282.
 dairy, growth, reproduction and lactation, and dry rations, Oreg. Bul. 329.
 dairy, growth standards, Mo. Bul. 336.
- Cattle—Continued.
 dairy, partition of nitrogen intake between growth, milk secretion, and urinary excretion, Mo. Res. Bul. 192.
 dairy, phosphorus deficiency and utilization of feed, Kans. Tech. Bul. 36.
 dairy, phosphorus requirement, Mich. Tech. Bul. 134.
 energy cost of horizontal walking, Mo. Res. Bul. 208.
 energy metabolism studies, Mo. Res. Bul. 180.
 feeding, Ind. Bul. 371.
 feeding, range, Idaho Bul. 209.
 feeding wheat, Mo. Bul. 325.
 Holstein-Friesian, inheritance of high butterfat percentage, N. J. Bul. 572.
 machine-dried soybean hay for fattening, La. Bul. 257.
 marketed in North Dakota, N. Dak. Bul. 275.
 parasites and parasitic diseases, P. R. Bul. 36.
 phosphorus deficiency, Fla. Bul. 264.
 phosphorus deficiency in rations, Minn. Tech. Bul. 91.
 poisoning by groundsel, Tex. Bul. 431.
 poisoning by *Psilostrophe* spp., Tex. Bul. 500.
 production, N. Dak. Bul. 275.
 production on mountain valley ranches, Wyo. Bul. 197.
 range, assimilation of calcium and phosphorus from mineral compounds, N. Mex. Bul. 214.
 range, cost of production, Nev. Bul. 133.
 range, digestion and mineral balance trials, N. Mex. Bul. 212.
 range, fattening, Idaho Bul. 209.
 range, hay, cottonseed meal and mineral supplements, digestion trials, N. Mex. Bul. 212.
 range, vitamin-A deficiency in relation to reproduction, Calif. Bul. 560.
 stiffs or sweeny in, Fla. Bul. 264.
 udder, causes of growth and function, Mo. Bul. 339.
 yearling, effect of management and sex on carcass, Mo. Res. Bul. 186.
 See also Calves; Cows; Dams; Heifers; Sires; Steers.
- Cauliflower worm, nonarsenical dusts for, N. Y. State Bul. 640.
- Cedar apple rust, control, Iowa Res. Bul. 166.
- Celama sorghiella*, Mo. Bul. 320.
- Celery—
 culture, Colo. Bul. 407.
 premature seeding, Mont. Bul. 292.
 yellows virus, transmission by leaf hoppers, Calif. Hilgardia, vol. 8, no. 10.
- Cephalosporium wilt and die-back in white elm, Nebr. Res. Bul. 70.
- Cercospora leaf-spot, sugar beets, Iowa Res. Bul. 168.
- Cereal hay. *See* Hay.
- Cereals—
 powdery mildew on, N. Y. (Cornell) Mem. 157.
 See also Grain.
- Cheese—
 consumption in Minneapolis, Minn. Bul. 311.
 cottage, from dehydrated milks, and disturbances in natural oxidation equilibrium of milk, Mo. Res. Bul. 216.
 cottage, from dry skim milk, Mo. Res. Bul. 187.

Cheese—Continued.

cream, effect of dry skim milk, Mo. Res. Bul. 213.

cream, manufacture, Geneva method, N. Y. State Tech. Bul. 226.

Chenopodium plants, for eradication of round worms in swine, S. Dak. Bul. 283.

Cherries—

canned and cold pack, production, Oreg. Bul. 310.

fruit setting, relation to light intensity, Mich. Tech. Bul. 136.

pollination, Utah Bul. 245.

production, Mich. Spec. Bul. 237.

propagation, seed and phyton, Vt. Bul. 352.

rootstocks, Vt. Bul. 352.

sweet, susceptibility to cracking, Idaho Bul. 211.

Cherry aphid, tar distillate emulsions in control, N. Y. State Bul. 637.

Cherry industry, economic study, Oreg. Bul. 310.

Chick embryo, effect of composition of air on, N. Y. (Cornell) Mem. 150.

Chickens—

bones of legs, malformation, Iowa Res. Bul. 172.

coccidiosis, Oreg. Bul. 314.

creeper, Conn. (Storrs) Bul. 193.

feeding for growth and prevention of slipped tendons, Tex. Bul. 476.

fowl pox, use of pigeon pox vaccine in, R. I. Bul. 238.

slipped tendon, and excess of phosphorus in ration, Iowa Res. Bul. 172.

slipped tendon, feeding for prevention, Tex. Bul. 476.

vitamin D requirements, Wash. Bul. 299.

Chicks—

cottonseed meal, alfalfa leaf meal, and meat and bone scraps compared, N. Mex. Bul. 221.

embryonic lethal characters, La. Bul. 255.

fish oils, as source of vitamin D for, Wash. Bul. 284.

nutritional requirements, Mo. Res. Bul. 198.

soybeans as protein supplement, Del. Bul. 183.

vitamin A supplements, Wash. Bul. 292.

vitamin D requirements, Pa. Bul. 303.

Chicory and chicory-coffee brews, effect on metabolism, Mich. Tech. Bul. 138.

Children—

school, dental decay, Tex. Bul. 491.

school, food, Tex. Bul. 489; Utah Bul. 246.

school, supplementary mid-morning feeding, Mass. Bul. 310.

See also Boys; Girls.

Chile wilt—

etiology and control, N. Mex. Bul. 223.

reduction by cultural methods, N. Mex. Bul. 216.

Chlorine products, as germicides on dairy farms, Vt. Bul. 369.

Chlorine, sterilization of ice cream freezers, N. Y. State Bul. 628.

Chlorosis, and manganese deficiency, R. I. Bul. 246.

Chondrodystrophy, in chick embryos, La. Bul. 255.

Christian County, farm management, Ky. Bul. 347.

Chromosome—

numbers in aneuploid apple seedlings, N. Y. State Tech. Bul. 209.

Chromosome—Continued.

numbers, violets, Vt. Bul. 367.

relations and fertility, violets, Vt. Bul. 378.

somatic telophase, optical analysis, N. Y. State Tech. Bul. 220.

structure in Tradescantiae, N. Y. State Tech. Bul. 220.

Chrysanthemums—

early blooms by use of black cloth, N. Y. (Cornell) Bul. 594.

Verticillium disease, Wash. Bul. 290.

Churches, rural, of Alleghany County, N. Y. (Cornell) Bul. 587.

Churns—

contamination, agar disc method for studying, Iowa Bul. 300.

microorganisms in, Iowa Res. Bul. 159.

Cicadula divisa, transmission of aster yellows to potato, Calif. Hilgardia, vol. 8, no. 10.

Cion. See Scion.

Cities—

relation to changes in rural trade and social areas, N. Y. (Cornell) Bul. 582.

relationship of open-country population to, N. Y. (Cornell) Bul. 583, 584.

Citrus—

cost of handling from tree to car, Fla. Bul. 266.

culture, Hawaii Bul. 71.

fertilization, and phosphate of soils, Calif. Bul. 571.

pectic constituents, Fla. Bul. 268.

Cladosporium fulvum, Ohio Bul. 539.

Claypans, development in soils, Mo. Res. Bul. 210.

Clearing land. See Land clearing.

Clostridia, nitrogen-fixing, metabolism, Iowa Res. Bul. 173.

Clothing, purchased by farm families, Tompkins County, N. Y. (Cornell) Bul. 615.

Clover—

red, black stem, Ky. Bul. 339.

red, resistance to *Sclerotinia trifoliorum*, Ky. Bul. 341.

red, roots, hardiness, Md. Bul. 370.

See also Sweetclover.

Coccidiosis, chickens, Oreg. Bul. 314.

Cod-liver oil, for laying pullets, Ky. Bul. 337.

Codling moth—

and arsenic deposit, Wash. Bul. 293.

and resistance to arsenic, Mo. Res. Bul. 202.

control, Idaho Bul. 200; N. Y. State Bul. 627; Pa. Bul. 283; S. C. Bul. 295.

problem in Missouri, Mo. Bul. 334.

spraying methods, Mich. Spec. Bul. 230.

Coffee and chicory brews, effect on metabolism, Mich. Tech. Bul. 138.

Cold Storage. See Storage, cold.

Collar rot of tomatoes, Colo. Bul. 402.

Collards, culture, La. Bul. 258.

Colloidal fractions of subsoils, Del. Bul. 186.

Colon organisms in raw milk, N. H. Tech. Bul. 57.

Colonial bentgrass, utilization of nutrients by, N. J. Bul. 570.

Color—

charts, soil testing, Mich. Tech. Bul. 132.

cotton fabrics, effect of sunlight, Tex. Bul. 474.

Colts, draft, liberal vs. limited rations, Mich. Spec. Bul. 253.

Communities—

- rural, development, Waterville, N. Y. (Cornell) Bul. 608.
- rural, social status and trends, Mo. Res. Bul. 199.
- Community areas, relation to town government, N. Y. (Cornell) Bul. 555.
- Commutation, study, Conn. (Storrs) Bul. 196.
- Conference on land utilization, Mo. Bul. 323; N. J. Bul. 552.
- Coniothyrium cane blight, dewberries, N. C. Bul. 291.
- Coniothyrium wernsdorffiae*, N. Y. (Cornell) Mem. 153.
- Connecticut state agricultural experiment station, report, Conn. (State) Bul. 347, 357.
- Connecticut state entomologist, report, Conn. (State) Bul. 349, 360.
- Connecticut Storrs agricultural experiment station, report, Conn. (Storrs) Bul. 192, 199.
- Conservation program, human elements in, Mo. Bul. 323.
- Contacts, rural organization, Ky. Bul. 350.
- Convolvulus arvensis*, Kans. Bul. 269; Nebr. Bul. 287.
- Cooking—
 - electrical, economy in, Maine Bul. 371.
 - practices, rural and village households, Maine Bul. 372.
 - use of lard, Mo. Bul. 335.
 - utensils for electric range, Wash. Bul. 283.
- Cooperative associations, farmers', organization and management, Fla. Bul. 263.
- Cooperative marketing. *See* Marketing, cooperative.
- Copper—
 - content of egg yolk, Ky. Bul. 342.
 - fungicides, and hydrocyanic acid gas, effect on cucumber, Mass. Bul. 303.
 - poisoning, sheep, Tex. Bul. 499.
 - red oxide, for damping-off, N. Y. State Bul. 643.
 - seed treatment for damping-off of spinach, N. Y. (Cornell) Bul. 566.
- Corn—
 - and soybean production, labor and power in, La. Bul. 253.
 - belt hog marketing, Ill. Bul. 408.
 - binder, for silage corn, Md. Bul. 362.
 - borer. *See* European corn borer.
 - dent, resistance to *Basisporium gallarum*, Iowa Res. Bul. 167.
 - destination, Iowa Bul. 318.
 - ear worm injury, relation to planting date, Va. Tech. Bul. 55.
 - ear worm moth, egg-laying, Va. Tech. Bul. 47.
 - ear worm studies, Md. Bul. 348.
 - experimental error in field plot tests, Iowa Res. Bul. 163.
 - fertilizers and manure for, Tenn. Bul. 149.
 - fodder and silage, steer feeding, N. Mex. Bul. 211.
 - fodder, corn silage, and hegari for lambs, compared, N. Mex. Bul. 222.
 - germination and molds, S. Dak. Bul. 275.
 - haplo-viable deficiency in, Mo. Res. Bul. 204.
 - hog plan, advantages to individual farm, Iowa Bul. 312.
 - hogging off, La. Bul. 236.

Corn—Continued.

- lodging, and morphological characters, Minn. Tech. Bul. 103.
- nutritive value as poultry feed, Kans. Bul. 268.
- plants, anchorage, Va. Tech. Bul. 46.
- preparation, in fattening lambs, Iowa Bul. 299.
- prices, fluctuations, Iowa Res. Bul. 164.
- seed treatment for dry rot, Iowa Res. Bul. 167.
- seed. *See* Seed, corn.
- silage. *See* Silage, corn.
- southern cornstalk borer on, S. C. Bul. 294.
- sweet, breeding, Conn. (State) Bul. 361.
- sweet, crossed, Conn. (State) Bul. 361.
- sweet, stover, harvesting, Md. Bul. 362.
- sweet, varieties, description, N. Y. State [Horticultural monograph] 1934.
- under irrigation, production and use, Wash. Bul. 278.
- varieties, relative growth and development, N. Y. (Cornell) Mem. 152.
- variety tests, Pa. Bul. 289.
- Corporate-owned land, Iowa Bul. 307.
- Coryza. *See* Rhinitis.
- Cost accounts, New York farms, N. Y. (Cornell) Bul. 554.
- Cost of handling, citrus, from tree to car, Fla. Bul. 266.
- Cost of keeping, dairy sires, Oreg. Bul. 312.
- Cost of living—
 - farm and industrial families, Ga. Bul. 180.
 - farm families, N. Dak. Bul. 271.
- Cost of marketing, livestock, Va. Bul. 288.
- Cost of operation, tractor, Ill. Bul. 395; Mont. Bul. 259.
- Cost of production—
 - agricultural products, Okla. Bul. 208.
 - apples, N. Y. (Cornell) Bul. 565.
 - cotton, Ariz. Bul. 146.
 - crops, Middle Rio Grande conservancy district, N. Mex. Bul. 215.
 - eggs and poultry, Utah Bul. 244.
 - eggs and pullets, Ariz. Bul. 145.
 - farm products. *See* Cost of production, agricultural products.
 - field crops, Ariz. Bul. 146.
 - fruit and vegetables, N. J. Bul. 555.
 - grapes, Mich. Spec. Bul. 242.
 - hogs, Ill. Bul. 390.
 - milk, N. C. Bul. 288; R. I. Bul. 241.
 - milk and butter fat, Oreg. Bul. 318.
 - pork, Ala. Bul. 240; Ill. Bul. 390.
 - potatoes, N. Y. (Cornell) Bul. 568.
 - pullets, Ariz. Bul. 145.
 - range cattle, Nev. Bul. 133.
- Costs—
 - and practices, walnut orchards, Oreg. Bul. 315.
 - and prices, farm, Mich. Tech. Bul. 139.
 - and returns, field crops, Ariz. Bul. 146.
 - and returns, milk and cream collection, Maine Bul. 373, 374.
 - and returns, potatoes, N. Y. (Cornell) Bul. 568.
 - and returns, spraying and dusting apples, Pa. Bul. 311.
 - horse and tractor power, Ill. Bul. 395.
 - in raising dairy heifers, Oreg. Bul. 324.
 - in turkey egg production, Oreg. Bul. 333.
 - in turkey production, Md. Bul. 355.

Costs—Continued.

- land clearing, Minn. Bul. 299.
- power, labor and machine in crop productions, Mo. Res. Bul. 197.
- roughage production, N. H. Bul. 273.

Cottage cheese. *See* Cheese, cottage.

Cotton—

- Acala, irrigation treatments, N. Mex. Bul. 220.
- ammonia and nitrate nitrogen for, Ga. Bul. 182.
- boll shedding, Ariz. Tech. Bul. 46.
- bollweevil. *See* Bollweevil.
- breeding investigations, N. Mex. Bul. 217.
- cost of production, Ariz. Bul. 146.
- experiments, Lawton field station, Okla. Bul. 209.
- fabrics, effect of sunlight, Tex. Bul. 474.
- farmers, economic factors in social life, Okla. Bul. 211.
- fiber, improving uniformity by use of Pressley sorter, Ariz. Tech. Bul. 54.
- fruiting and boll shedding, Ariz. Tech. Bul. 46.
- genetic relations of nankeen lint to plant color and leaf shape, Ark. Bul. 300.
- genetic relations, plant and lint color and leaf shape, Ark. Bul. 294.
- grade and staple length, Okla. Bul. 212.
- grade, staple and variety, Miss. Bul. 300.
- home market for, N. C. Bul. 284.
- in the seed, sale of, Okla. Bul. 219.
- markets, price-quality relationships, Tex. Bul. 501.
- nitrate of soda, effect on yield, Tex. Bul. 490.
- planting seed, relation to staple length, N. C. Bul. 296.
- prices, relation to grade and staple length, Ga. Bul. 174; Miss. Tech. Bul. 21; N. C. Bul. 289; S. C. Bul. 290.
- prices, relation to quality, Tenn. Bul. 153.
- production, quality, N. Mex. Bul. 225.
- production under irrigation, Wichita Valley, Tex. Bul. 494.
- rust, or potash hunger, Ark. Bul. 308.
- seed purity, relation to spinning quality, N. C. Tech. Bul. 45.
- spacing, N. Mex. Bul. 219.
- spacing, and plant characters, La. Bul. 246.
- spinning quality, relation to seed purity, N. C. Tech. Bul. 45.
- staple length and prices, Ga. Bul. 174; Miss. Tech. Bul. 21; N. C. Bul. 289; S. C. Bul. 290.
- staple, length and uniformity, La. Bul. 259.
- staple length, relation to quality of seed, N. C. Bul. 296.
- wilt and rust control, Ark. Bul. 308.
- wilt, varietal resistance and effect of fertilizers on, Ark. Bul. 308.

Cottonseed, effect of potash on oil and protein content, Miss. Tech. Bul. 20.

Cottonseed hulls—

- and grass hays for milk production, compared, La. Bul. 238.
- for steers, Miss. Bul. 301.

Cottonseed meal—

- as protein for dairy cattle, N. Mex. Bul. 226.
- for horses and mules, Tex. Bul. 492.
- for pigs, Ohio Bul. 534.

Cottonseed meal—Continued.

- nutritive value for chicks, N. Mex. Bul. 221.
- range cattle digestion trials, N. Mex. Bul. 212.
- steer feeding, N. Mex. Bul. 211.

Country—

- and town, service relationships, Wis. Res. Bul. 117.
- neighborhoods, rural groups, Wis. Res. Bul. 120.
- population. *See* Population.

County—

- consolidation, Colo. Bul. 406.
- expenditures, Calif. Bul. 582.
- government, Colo. Bul. 413.
- government costs, Pa. Bul. 297.
- social studies, Va. Bul. 291.

Cover crops—

- and orchard soils, N. Y. State Bul. 632.
- effect on soil solution, orchards, Calif. Hilgardia, vol. 7, no. 14.

Cowpeas, stored, weevils in, Tenn. Bul. 150.

Cows—

- alfalfa seed screenings as feed, Idaho Bul. 206.
- beef, maintenance for calf production, Mont. Bul. 275.
- cane molasses as feed, Hawaii Bul. 73.
- chronic toxicosis, and ingestion of fluorine, Wis. Res. Bul. 123.
- cottonseed hulls and hay compared for milk production, La. Bul. 238.
- dairy, feeding, Mich. Spec. Bul. 250.
- effect of calcium deficient roughages, Fla. Bul. 262.
- fat and milk production, effect of season, Nev. Bul. 131.
- feeding alfalfa hay for milk production, Oreg. Bul. 328.
- feeding artificially dried young grass, Vt. Bul. 350, 359, 368.
- feeding roughage without grain, Wyo. Bul. 202.
- feeding with and without grain, Mont. Bul. 293.
- grain as supplement to pasture and roughage for, La. Bul. 241.
- grinding grain for, Ind. Bul. 372.
- hay feeding, Ohio Bul. 538.
- mammary glands, functional individuality, Mo. Res. Bul. 211.
- mastitis. *See* Mastitis.
- milk production, effect of planes of protein intake, N. Y. (Cornell) Bul. 578.
- milk secretion, effect on fat intake, N. Y. (Cornell) Bul. 593.
- oat feeds as roughage, S. Dak. Bul. 281.
- pea feed and byproducts for, Wash. Bul. 287.
- root crops for, W. Va. Bul. 256.
- rotation and continuous grazing, effect on pasture for, Wash. Bul. 294.
- source of "oxidized" flavors of milk, N. Y. (Cornell) Bul. 606.
- succulence in ration and water consumption, Conn. (Storrs) Bul. 198.
- vitamin A requirements, Tex. Bul. 495.
- wheat versus milo for, Tex. Bul. 480.
- See also* Heifers.

Crabapples—

- American, N. Y. State Tech. Bul. 208.
- Japanese flowering, Sieboldii group, N. Y. State Tech. Bul. 214.

- Cranberries, vitamins of, effect of processing, Mass. Bul. 296.
- Cream—
and maple sugar, Vt. Bul. 364.
cheese. *See* Cheese, cream.
collection, Maine Bul. 373, 374.
cooling and storing, effect on butter, Oreg. Bul. 323.
cooling at buying station, Ind. Bul. 374.
flavors, and viscosity, effect of pasteurization, N. Y. State Tech. Bul. 224.
for butter, effect of time element in marketing, Ind. Bul. 383.
homogenization, Pa. Bul. 287.
market, quality and improvement, Ill. Bul. 396.
methods of cooling and storing, effect on butter, Oreg. Bul. 326.
methylene blue reduction test for grading, Minn. Bul. 310.
prices and consumption, Ill. Bul. 397.
tallowiness, Ill. Bul. 389.
vitamin A content, Nebr. Res. Bul. 69.
whipped, and dry skim milk, Mo. Res. Bul. 214.
- Creatinine—
and urinary nitrogen, and energy metabolism in cattle, Mo. Res. Bul. 191.
metabolism, studies with white rats, Mo. Res. Bul. 189.
nitrogen, as function of body weight, Mo. Res. Bul. 220.
nitrogen, studies with rats, Mo. Res. Bul. 190.
- Creepers fowl, skeletal growth, Conn. (Storrs) Bul. 193.
- Crinkle disease, of strawberries, Oreg. Bul. 319.
- Crittenden County, farm taxation and government, Ky. Bul. 355.
- Crop adaptation to soil types, N. C. Bul. 293.
- Crop and livestock production, Newlands project, Nev. Bul. 139, 134.
- Crop and soil management practices, Md. Bul. 362.
- Crop mixture trials, Mich. Spec. Bul. 256.
- Crop plants, influence on those which follow, R. I. Bul. 243.
- Crop production—
and soils, Genesee County, N. Y. (Cornell) Bul. 567.
dry land, Nebr. Bul. 279.
labor and power, Ind. Bul. 378.
power, labor and machine costs, Mo. Res. Bul. 197.
practices, Mich. Spec. Bul. 241.
- Crop rotations—
Coastal Plain, N. C. Bul. 280.
experiments, Ark. Bul. 290.
legume and nonlegume, water and nitrogen relations, lysimeter experiments, N. Y. State Tech. Bul. 212.
manure and fertilizers in, Md. Bul. 362.
soil experiment fields, Ill. Bul. 393, 402.
- Crop yields, soil experiment fields, Ill. Bul. 393, 402.
- Crops—
and soils, effect of ammonium compounds on, N. J. Bul. 571.
varieties and planting mixtures, Md. Bul. 362.
See also Field crops; Forage crops.
- Crossties and piling, marketing, Ind. Bul. 395.
- Crown gall and hairy root of apple, N. Y. State Bul. 638.
- Cube root, aphicidal properties, N. J. Bul. 581.
- Cucumber plants, effect of hydrocyanic acid gas, Mass. Bul. 303.
- Cucumbers—
fermentation, formation of ropy brine, Mich. Tech. Bul. 140.
morphological relationships, Minn. Tech. Bul. 96.
vegetative and reproductive responses associated with fruit development, N. Y. (Cornell) Mem. 163.
- Cucumis sativus*, morphological relationships, Minn. Tech. Bul. 96.
- Culex pipiens*, N. H. Tech. Bul. 58.
- Curb market, Wilmington, Del. Bul. 191.
- Curly top—
infection of flowering plants, Calif. Hilgardia, vol. 8, no. 8.
virus, properties of, Calif. Hilgardia, vol. 8, no. 1.
weed host and overwintering, Calif. Hilgardia, vol. 8, no. 8.
- Currant industry, foreign production, trade and government aid, Calif. Bul. 566.
- Currants, fertilizers, commercial on, N. Y. State Bul. 641.
- Current meters, rating and use, Colo. Tech. Bul. 3.
- Cut-over lands—
planning farm organization for, Minn. Bul. 295.
second growth, Minn. Bul. 304.
- Cuttings—
evergreen and deciduous, effect of chemicals, medium and basal cut on rooting, N. Y. (Cornell) Bul. 571.
woody, propagation in electric hotbeds, N. Y. (Cornell) Bul. 618.
- Cyanamid as source of nitrogen for sugarcane, La. Bul. 237.
- Cyclamen mite, control experiments, Minn. Tech. Bul. 93.
- Dairies, cost of production studies, N. C. Bul. 283.
- Dairy farmers. *See* Farmers, dairy.
- Dairy farming. *See* Dairying.
- Dairy farms—
economic study, N. Y. (Cornell) Bul. 551, 562.
farm management study, Montgomery County, Md. Bul. 356.
management and production, N. Y. (Cornell) Bul. 562.
- Dairy herd at Cornell University, N. Y. (Cornell) Bul. 576.
- Dairy industry, economic readjustment, Del. Bul. 190.
- Dairy pasteurizers, N. Y. State Tech. Bul. 207, 211.
- Dairy products—
consumption, Minneapolis, Minn. Bul. 311.
export and import trade, Mich. Tech. Bul. 131.
lipolytic bacteria, as determined with Nile-blue sulphate, Iowa Res. Bul. 169.
marketing, Ind. Bul. 352.
See also Butter; Buttermilk; Cheese; Cream; Ice cream; Milk; Skim milk.
- Dairy refrigeration, on rural electric lines, Ala. Bul. 241.

- Dairy utensils—**
 agar disc method for studying contamination, Iowa Bul. 300.
 sterilizers, electrically heated, Pa. Bul. 296.
 use of chlorine germicides, Vt. Bul. 369.
- Dairying—**
 and marketing dairy products, Ind. Bul. 382.
 cost and efficiency in, Oreg. Bul. 318.
 economic studies, N. Y. (Cornell) Bul. 551, 562; Vt. Bul. 376.
 efficiency studies, N. H. Bul. 275.
 studies, Orleans, St. Albans, Randolph and Richmond areas, Vt. Bul. 376.
See also Milk production.
- Damping-off—**
 seed, red copper oxide for, N. Y. State Bul. 643.
 spinach, copper seed treatment, N. Y. (Cornell) Bul. 566.
 tobacco, Conn. State Bul. 359.
 zinc oxide, soil and seed treatment, N. Y. State Bul. 650.
- Dams, proved, in dairy cattle breeding, N. Y. State Bul. 645.**
- Date palm, heart rot, Ariz. Tech. Bul. 48.**
- Death camas, livestock poisoning, Wyo. Bul. 194.**
- Deer. *See* Moose.**
- Deficiency diseases—**
 hematopoietic function in, Ark. Bul. 286.
 use of fishery products in, Maine Bul. 375.
- Deflation, effect on agriculture, Nebr. Res. Bul. 71.**
- Delaware agricultural experiment station, report, Del. Bul. 188.**
- Dental decay, school children, Tex. Bul. 491.**
- Dentin, rat incisor, changes in experimental fluorosis, Ariz. Tech. Bul. 52.**
- Depopulation, in Santuc Township, S. C. Bul. 287.**
- Derris—**
 aphicidal properties, N. J. Bul. 581.
 dusts, for cauliflower worm, N. Y. State Bul. 640.
 insecticidal properties from root residue, N. J. Bul. 576.
 toxicity to sucking and chewing insects, N. J. Bul. 576.
- Dewberries—**
 coniothyrium cane blight and type of pruning, N. C. Bul. 291.
 rosette disease, La. Bul. 250.
- Dewberry anthracnose, spraying for, N. J. Bul. 574.**
- Diacetyl, in butter cultures, Iowa Res. Bul. 155.**
- Diatraea crambidoides*, S. C. Bul. 294.**
- Diatraea saccharalis*, La. Bul. 235, 240, 248.**
- Dictyocaulus filaria*, Oreg. Bul. 327.**
- Diesel power and field operating costs, Mont. Bul. 289.**
- Dietary requirements for fertility and lactation, Ark. Bul. 284.**
- Digestibility, soft-curd milk, Pa. Bul. 312.**
- Diker-ridger, construction and use, Mont. Bul. 281.**
- Diplocarpon earliana*, La. Bul. 252.**
- Diptera, aquatic, N. Y. (Cornell) Mem. 164.**
- Dishwashing, time and cost evaluation, Wash. Bul. 303.**
- Dogs, mammary gland development, Mo. Bul. 207.**
- Dolomite—**
 conservation in soil and methods of incorporation, Tenn. Bul. 152; Va. Tech. Bul. 54.
- Downy mildew, cantaloupes, Ga. Bul. 175.**
- Drainage—**
 basins, Nev. Bul. 136.
 district, bonds, Mo. Bul. 323.
 districts, financial rehabilitation, Ariz. Bul. 144.
 Grand River bottoms, Mo. Bul. 323.
 in Missouri, history, Mo. Bul. 323.
 taxation delinquency, Mo. Bul. 323.
- Drains, tile, spacing and depth, Minn. Tech. Bul. 101.**
- Drop inlets, hydraulic characteristics, Wis. Res. Bul. 122.**
- Drug products, analyses and inspection, Conn. (State) Bul. 354, 363.**
- Dry farming, use of diker-ridger in, Mont. Bul. 281.**
- Dry land crop production, Nebr. Bul. 279.**
- Dusting—**
 apple orchards, Ohio Bul. 527.
See also Spraying and dusting.
- Dusts—**
 formaldehyde for seedlings, Ohio Bul. 520.
 nonarsenical, for cauliflower worm, N. Y. State Bul. 640.
 red copper oxide, for damping-off, N. Y. State Bul. 643.
- Eastern tent caterpillar, cycles of abundance, N. J. Bul. 579.**
- Economic areas, Broome County, N. Y. (Cornell) Bul. 559.**
- Economic situation in 1933, Iowa Bul. 310.**
- Education, financing, Del. Bul. 182.**
- Egg-feed ratio, Wash. Bul. 297.**
- Egg-laying contests—**
 feed consumption studies, Md. Bul. 359.
 results, Utah Bul. 248.
- Egg-laying habits of corn ear worm moth, Va. Tech. Bul. 47.**
- Egg market, New York, daily prices and supply, N. Y. (Cornell) Bul. 596.**
- Egg-white foams, effects of physical and chemical factors on, Colo. Tech. Bul. 9.**
- Eggs—**
 and feed prices, Wash. Bul. 297.
 and pullets, cost of production, Ariz. Bul. 145.
 candling appearance, relation to quality, Calif. Bul. 561.
 consumers' preference, and buying practices, R. I. Bul. 240.
 cooperative shipping, Ind. Bul. 390.
 cost of production, Ariz. Bul. 145.
 developing, biochemistry and biophysics, N. Y. (Cornell) Mem. 150.
 effect of feed supplements on, Ark. Bul. 293.
 effect of inadequate rations, Kans. Tech. Bul. 34.
 game birds, artificial incubation, N. Y. (Cornell) Bul. 616.
 hatchability, Kans. Tech. Bul. 34, 37.
 hatchability, studies, Mo. Bul. 341.
 incubation, electrical, effect of current interruption, Calif. Bul. 550.
 iron and copper content of yolk, Ky. Bul. 342.
 market movement, Ohio Bul. 536.
 market quality, effect of feed, age, and temperature, N. Mex. Bul. 224.
 prices, Mo. Bul. 337.
 prices and quality, N. Y. (Cornell) Bul. 597.

Eggs—Continued.

- prices and supply, N. Y. (Cornell) Bul. 596.
- production, breeding for, Mass. Bul. 293, 307.
- production, costs and returns, Utah Bul. 244.
- production, effects of confinement brooding, Ky. Bul. 346.
- production, feed purchasing power of, Mo. Bul. 337.
- production, feeding and lighting for, Wyo. Bul. 203.
- production, rice byproducts for, Ark. Bul. 304.
- production, vitamin A requirement for, Tex. Bul. 493.
- time interval from first egg to standard weight in pullets, Mass. Bul. 313.
- turkey, incubation, humidity and weight loss, Nebr. Res. Bul. 74.
- weight, in domestic fowl, Mo. Bul. 332.
- yolk and shell color, consumer preference, Mo. Bul. 329.
- yolk, color concentrations, vitamin A and D activity, Mo. Res. Bul. 205.
- yolk, iron and copper content, Ky. Bul. 342.
- yolk, pigmentation and pimiento feeds, Ga. Bul. 183.
- El Dorado County, land utilization, Calif. Bul. 572.
- Electric hotbeds, propagating woody cuttings, N. Y. (Cornell) Bul. 618.
- Electric lights, in forcing greenhouse crops, Ind. Bul. 380.
- Electric plants, wind driven, Iowa Bul. 297.
- Electric range, utensils for, Wash. Bul. 233.
- Electric refrigeration, dairy, Ala. Bul. 241.
- Electric stoves, study of, Nebr. Res. Bul. 68.
- Electrical cooking, economy in, Maine Bul. 371.
- Electrical incubation, effect of current interruption, Calif. Bul. 550.
- Electrically heated dairy utensil sterilizers, Pa. Bul. 296.
- Electricity—
 - on farms, Nebr. Bul. 289.
 - primer, Maine Bul. 376.
 - soil heating in forcing gladiolus, Calif. Bul. 584.
- Electrodialysis, subsoils, Del. Bul. 186.
- Elevators—
 - farmers', financial operations, Okla. Bul. 221.
 - farmers', hedging grain, N. Dak. Bul. 272.
 - farmers', membership problems, Iowa Bul. 321.
 - farmers', spring wheat area, business operations, S. Dak. Bul. 282.
- Elm, white, *Cephalosporium* wilt and die-back, Nebr. Res. Bul. 70.
- Empoasca fabae*, Ky. Bul. 348.
- Enamel, mottled, experimental production, Ariz. Tech. Bul. 45, 52.
- Encephalomyelitis, equine, Md. Bul. 369; Nev. Bul. 132.
- Energy cost of household tasks, Wash. Bul. 282.
- Engine fuels, alcohol-gasoline, Idaho Bul. 204.
- Entomologist—
 - report, Conn. (State) Bul. 349, 360.
 - report, Montana, Mont. Bul. 294.
- Enzymes, proteolytic, action on protein of milk and gelatine, Ind. Bul. 385.
- Epithelioma, use of pigeon pox vaccine in, R. I. Bul. 238.

Epitrix cucumeris—

- and *E. subcrinita*, Wash. Bul. 230.
- control, Colo. Bul. 400.
- Equine encephalomyelitis, Md. Bul. 369; Nev. Bul. 132.
- Eriophyes essigi*, Wash. Bul. 279.
- Eriosoma lanigerum*, Tenn. Bul. 151.
- Erwinia amylovora*—
 - overwintering and dissemination, Ark. Bul. 283.
 - See also *Bacillus amylovorus*.
- Erysiphe graminis*, N. Y. (Cornell) Mem. 157.
- European canker, black walnut, W. Va. Bul. 261.
- European corn borer—
 - adjusting farming to, Ind. Bul. 389.
 - control with farm machinery, Pa. Bul. 284.
- Eutettix tenellus*, Calif. Hilgardia, vol. 7, no. 8.
- Evaporation of water, rate of, Tex. Bul. 484.
- Evergreens—
 - cuttings, effect of chemicals, medium and basal cut on rooting, N. Y. (Cornell) Bul. 571.
 - See also Pine; Spruce, Norway.
- Ewes, acidosis, Ky. Bul. 354.
- Expenditures—
 - county, Calif. Bul. 582.
 - farm family. See Families, farm, expenditures.
- Experimental error in field plot tests, corn, Iowa Res. Bul. 163.
- Export and import trade, dairy products, Mich. Tech. Bul. 131.
- Fabrics, cotton, effect of sunlight on color and strength, Tex. Bul. 474.
- Fallow, weed, in tobacco cropping systems, Md. Bul. 363.
- Families—
 - country, Onondaga County, relationships to socio-economic areas, villages, and cities, N. Y. (Cornell) Bul. 584.
 - farm and industrial, cost of living, Ga. Bul. 180.
 - farm and village, cooking practices, Maine Bul. 372.
 - farm, buying for the household, N. Y. (Cornell) Bul. 561.
 - farm, cash contribution by women, Vt. Bul. 355.
 - farm, clothing purchased, N. Y. (Cornell) Bul. 615.
 - farm expenditures, Ga. Bul. 180; Ill. Bul. 406; N. Y. (Cornell) Bul. 561; S. C. Bul. 299.
 - farm, food habits and health, Tompkins County, N. Y. (Cornell) Bul. 563.
 - farm, growth, in relation to activities, N. C. Bul. 298.
 - farm, income and cost of living, N. Dak. Bul. 271.
 - farm, income and farm organization, Ky. Bul. 351.
 - farm, insurance, Mich. Tech. Bul. 133.
 - farm, life cycle, Wis. Res. Bul. 121.
 - farm vs. village living, Utah Bul. 249.
 - food sources, Md. Bul. 346.
 - living, Wis. Res. Bul. 114.
 - rural, mobility, N. Y. (Cornell) Bul. 607.
 - rural relief, S. Dak. Bul. 289.
 - social activities, Unionville district, Pa. Bul. 286.

- Farm buildings—
rammed earth, S. Dak. Bul. 277.
studies, Mo. Res. Bul. 218.
See also Houses.
- Farm bureau, California, objectives and activities, Calif. Bul. 563.
- Farm credit. *See* Agricultural credit.
- Farm crops—
comparative values in yield trials, Minn. Bul. 312.
local prices, Minn. Bul. 303.
- Farm homemakers. *See* Women, farm.
- Farm housing. *See* Housing.
- Farm implements, use and expense, Ky. Bul. 345.
- Farm land—
marginal, Ind. Bul. 376; Mo. Bul. 323.
prices, Nebr. Res. Bul. 72.
- Farm management—
and practices, dairy farms, N. H. Bul. 275.
and production, dairy farms, N. Y. (Cornell) Bul. 562.
and reorganization, N. Dak. Bul. 273.
dairy farms, Md. Bul. 356; N. Y. (Cornell) Bul. 562.
for better income, Wis. Bul. 429.
grape farms, N. Y. (Cornell) Bul. 605.
Idaho Falls area, Idaho Bul. 198.
northwest Wisconsin, Wis. Bul. 426.
potato farms, Va. Bul. 289.
rice farms, La. Bul. 233.
study of crop production practices, Mich. Spec. Bul. 241.
Todd, Christian, and Warren Counties, Ky. Bul. 347.
See also Farm organization.
- Farm mortgages. *See* Mortgages.
- Farm organization—
and family incomes, Knott County, Ky. Bul. 351.
cut-over land, Minn. Bul. 295.
effect of mechanization, Mont. Bul. 278.
fruit farms, N. H. Bul. 279.
pastures in, Iowa Bul. 323.
practices, Middle Rio Grande conservancy district, N. Mex. Bul. 215.
rice farms, La. Bul. 233.
southeastern Michigan, Mich. Spec. Bul. 254.
See also Farm management.
- Farm price data, reliability and adequacy, S. Dak. Bul. 286.
- Farm prices. *See* Prices, farm.
- Farm products. *See* Agricultural products.
- Farm real estate. *See* Real estate, farm.
- Farm records, analysis, Iowa Res. Bul. 160.
- Farm reorganization and management, N. Dak. Bul. 273.
- Farm systems, northwest Wisconsin, Wis. Bul. 426.
- Farm tenancy, and leasing systems, Md. Bul. 352.
- Farm vs. village living, Utah Bul. 249.
- Farm youth—
interests, activities, and problems, N. Y. (Cornell) Bul. 617.
See also Boys; Girls.
- Farmers—
cooperative associations, organization and management, Fla. Bul. 263.
cotton, economic factors in social life, Okla. Bul. 211.
- Farmers—Continued.
cotton markets. *See* Cotton markets.
dairy, earnings, Minn. Bul. 314.
elevators. *See* Elevators.
occupational mobility, S. C. Bul. 296.
Farmhouses. *See* Houses.
- Farming—
adjusting to corn borer conditions, Ind. Bul. 389.
areas, type of, Idaho Bul. 208.
part-time and small scale, Md. Bul. 357.
part-time, for income, Calif. Bul. 581.
small scale, Md. Bul. 357.
systems. *See* Farm management.
types. *See* Farms, types.
- Farms—
agricultural resources, and factors affecting use, Idaho Bul. 207.
dairy. *See* Dairy farms.
foreclosed, and debt problem, Mo. Bul. 323.
fruit. *See* Fruit farms.
grape, economic study, N. Y. (Cornell) Bul. 605.
purchasers, suggestions to, Minn. Bul. 309.
rice. *See* Rice farms.
types, Idaho Bul. 207, 208; Pa. Bul. 365; Wash. Bul. 288, 300, 301.
types, analysis of differences, Ill. Bul. 403.
types, eastern Connecticut Highland, Conn. (Storrs) Bul. 191.
types, nature and distribution, Wash. Bul. 301.
types, southeastern Montana, Mont. Bul. 287.
- Farmwoods. *See* Woodlands, farm.
- Fat intake, effect on milk secretion, N. Y. (Cornell) Bul. 593.
- Fats and oils, market, position of lard in, Iowa Res. Bul. 171.
- Feed, mixing, bin method, Idaho Bul. 203.
- Feeders, purchase and rations for fattening, Minn. Bul. 300.
- Feeding stuffs—
analyses and inspection, Conn. (State) Bul. 351, 362; Ky. Bul. 310; N. H. Bul. 277, 281; N. J. Bul. 554, 573; Tex. Bul. 488, 502; Vt. Bul. 351, 366, 372, 385.
inspection. *See* Feeding stuffs, analyses and inspection.
mineral content, Oreg. Bul. 309.
registrations, N. J. Bul. 554, 573.
utilizability, influence of the plane of nutrition, Mo. Res. Bul. 193.
vitamin A content, Tex. Bul. 477.
- Feeds—
and forage, composition, Mont. Bul. 283.
dairy, vitamin E content, Nebr. Res. Bul. 73.
industrial alcohol byproduct, Md. Bul. 349.
rice byproducts as, La. Bul. 242.
roughage, N. H. Bul. 273.
See also Feeding stuffs.
- Fence posts, durability and preservative treatment, Ark. Bul. 287.
- Fenusa pumila, Conn. (State) Bul. 348.
- Fertilizers—
analyses and inspection, Conn. (State) Bul. 355, 365; Mo. Bul. 321, 333; N. H. Bul. 278, 283; N. J. Bul. 551, 557, 561, 578, 582; S. C. Bul. 291, 297; Tex. Bul. 487, 498; Vt. Bul. 361, 381.
apple trees, on acid soils, N. Y. State Bul. 646.
apple trees, relation to winter injury, N. Y. State Bul. 647.

Fertilizers—Continued.

- blueberries, N. J. Bul. 558.
 - concentrated, gypsum as supplement, N. C. Bul. 299.
 - currant, N. Y. State Bul. 641.
 - effect on anchorage of corn plants, Va. Tech. Bul. 46.
 - effect on crops and soils, S. Dak. Bul. 280.
 - floats as, effect of farm manure on, N. Y. (Cornell) Bul. 574.
 - for corn, Tenn. Bul. 149.
 - for field crops on Berks shale soil, Va. Bul. 292.
 - muck soil, N. C. Bul. 292.
 - nitrogen and potassium for fruit, Md. Bul. 366.
 - nitrogenous, effect on protein content of corn for silage, N. J. Bul. 563.
 - nitrogenous, for field crops, Ind. Bul. 386.
 - nitrogenous, in apple orchards, N. Y. State Bul. 623.
 - on North Carolina soils, N. C. Bul. 293.
 - on "run-out" hay lands, N. H. Bul. 271.
 - pastures, Conn. (Storrs) Bul. 187, 189; Mass. Bul. 306; N. J. Bul. 564, 565.
 - pecans, Fla. Bul. 270.
 - phosphate, experiments, Mont. Bul. 280.
 - phosphatic, availability, Ark. Bul. 289.
 - placement tests, Md. Bul. 362.
 - potatoes, N. C. Bul. 283.
 - registration, Mo. Bul. 321, 333.
 - rice, Ark. Bul. 291.
 - strawberries, N. H. Tech. Bul. 55.
 - tobacco, Conn. (State) Bul. 359; Md. Bul. 358.
 - tomatoes, N. Y. State Bul. 619.
- Field crops—**
- comparative values in yield trials, Minn. Bul. 312.
 - costs and returns, Salt River Valley, Ariz. Bul. 146.
 - diseases, Ariz. Bul. 148.
 - dry land production, Nebr. Bul. 279.
 - experiments, Ark. Bul. 290.
 - management, N. Y. (Cornell) Bul. 567, 570, 600, 612.
 - mixture trials, Mich. Spec. Bul. 256.
 - nitrate of soda for, Mo. Bul. 327.
 - nitrogenous fertilizers for, Ind. Bul. 386.
 - on Berks shale soil, Va. Bul. 292.
 - production, farm management in, Mich. Spec. Bul. 241.
- Figs—**
- magnolia, methods of preservation, Tex. Bul. 483.
 - spoilage diseases, epidemiology, Calif. Hilgardia, vol. 7, no. 13.
- Fire blight—**
- apples and pears, N. Y. (Cornell) Bul. 557.
 - pathogen, overwintering, and dissemination, Ark. Bul. 283.
 - pears and related plants, Calif. Bul. 586.
- Fish—**
- and game, diseases and parasites, Oreg. Bul. 322.
 - food of, production in lakes, Minn. Tech. Bul. 90.
 - meal, for calves, Md. Bul. 354.
 - oils, source of vitamin D for chicks, Wash. Bul. 284.
 - trout, food of, Oreg. Bul. 323.

- Fishery products, utilization in deficiency diseases, Maine Bul. 375.
- Flax, varieties, S. Dak. Bul. 291.
- Flaxseed—
 - market and tariff, Mont. Bul. 272.
 - prices, N. Dak. Bul. 268.
- Flies, aquatic stages, N. Y. (Cornell) Mem. 164.
- Floats, as fertilizers, effect of farm manure on, N. Y. (Cornell) Bul. 574.
- Flour—
 - cake and biscuit making qualities, Md. Bul. 360.
 - hard wheat, effect of storage on breadmaking qualities, Wyo. Bul. 198.
- Flower garden, Colo. Bul. 408.
- Flowering plants, infected with curly top and aster yellows, Calif. Hilgardia, vol. 8, no. 8.
- Flowers—
 - culture, Ohio Bul. 525.
 - in greenhouse, radiation in forcing, Ind. Bul. 380.
 - wild, of North Dakota, N. Dak. Bul. 269.*See also* Carnations; Chrysanthemums, Gladiolus; Ornamentals; Phlox; Rock garden plants; Snapdragon.
- Fluke, oviduct, studies, Minn. Tech. Bul. 98.
- Fluorides, and mottled enamel of teeth, Ariz. Tech. Bul. 46.
- Fluorine toxicosis in dairy cows, Wis. Res. Bul. 123.
- Fluorosis, histologic changes in enamel and dentin of rat incisor, Ariz. Tech. Bul. 52.
- Food—
 - analyses and inspection, Conn. (State) Bul. 354, 363.
 - artificial, for infants, N. Y. (Cornell) Bul. 610.
 - cooking practices, Maine Bul. 372.
 - habits, farm families, N. Y. (Cornell) Bul. 563.
 - Japanese, used in Hawaii, Hawaii Bul. 68.
 - products, analysis and inspection, Conn. (State) Bul. 354, 363.
 - school children, Mass. Bul. 310; Tex. Bul. 489.
 - Utah Bul. 246.
 - used by farmers, sources, Md. Bul. 346.
 - utilization in the rat, Minn. Tech. Bul. 92.
 - vitamin A content, Tex. Bul. 477.*See also* Nutrition.
- Foot rot of sheep, Mont. Bul. 285.
- Forage crops—
 - for central Washington, Wash. Bul. 281.
 - Matanuska region, Alaska Bul. 11.
 - reseeding on burnt-over land, Idaho Bul. 201.*See also* Roughage.
- Forage sorghums, Okla. Bul. 210; S. Dak. Bul. 285; Tex. Bul. 496.
- Forages, composition, Mont. Bul. 283.
- Forest fires, longleaf pine region, effect on soil, Fla. Bul. 265.
- Forest litter, acidity and nutrient content, relation to humus and soil, N. Y. (Cornell) Mem. 166.
- Forest products. *See also* Crossties; Piling.
- Forest soils, effect of fires on chemical composition, Fla. Bul. 265.
- Forest trees, studies, Vt. Bul. 379.
- Forest-type studies, in Adirondack region, N. Y. (Cornell) Mem. 165.
- Forestry—
 - and parks, relation to land use, N. J. Bul. 552.
 - in land utilization, Mass. Bul. 294; Mo. Bul. 323.

Forests—

- hardwood, composition and growth, and soil characteristics, Mich. Tech. Bul. 135.
- natural reproduction, Vt. Bul. 354.
- oak, growth and yield, Pa. Bul. 283.
- second growth on cut-over lands, Minn. Bul. 304.

See also Trees.

Formaldehyde dust for seedling diseases, Ohio Bul. 520.

Fowl paralysis—

- diagnosis, Conn. (Storrs) Bul. 200.
- studies, Conn. (Storrs) Bul. 200; Mass. Bul. 308.

Fowl pox. See Epithelioma.

Fowl typhoid, hematology of, N. C. Tech. Bul. 44.

Fowls. See Poultry.

Freezing injury, apple trees, N. Y. (Cornell) Bul. 556.

Frenching of tobacco, Ky. Bul. 349; Va. Tech. Bul. 49.

Fresno milk market, analysis, Calif. Bul. 559.

Frozen fruit for ice cream, N. Y. State Bul. 634.

Fruit—

- and vegetable farming, costs and prices, N. J. Bul. 555.
- and vegetables, freezing, storage changes in, Calif. Bul. 551.
- diseases, control, Ky. Bul. 353.
- farms, organization, N. H. Bul. 279.
- firmness and keeping quality, effect of fertilizers, Md. Bul. 366.
- fresh, history of cooperation in marketing, Calif. Bul. 557.
- frozen, for ice cream, N. Y. State Bul. 634.
- growing, relation to soils, N. Y. (Cornell) Bul. 575, 592, 609.
- insects, control, Ky. Bul. 353.
- insects, tar distillate emulsions in control, N. Y. State Bul. 636.
- new or noteworthy, N. Y. State Bul. 620.
- pests, control, Ky. Bul. 353.
- pollination, and bees, N. Y. (Cornell) Mem. 147.
- production, and soils, N. Y. (Cornell) Bul. 567.
- production, land utilization for, Mich. Spec. Bul. 257.
- rotting sclerotinia, Md. Bul. 371.
- stone, insects, Mich. Spec. Bul. 244.
- storage, ice in, Ind. Bul. 379.
- trees, dormant oil spraying, tank-mixture method, Calif. Bul. 579.
- trees, insects, dormant sprays, Oreg. Bul. 321.
- trees, rootstocks, N. Y. State Bul. 649.
- trees, stone, bacterial canker, Calif. Hilgardia, vol. 8, no. 3.
- trees, tar distillate emulsions spray, N. Y. State Bul. 636.
- trees, tar oil distillates as spray materials, Va. Bul. 293.
- varieties, N. Mex. Bul. 209.
- varieties for commercial and home use, Ohio Bul. 528.
- washer, design, Wash. Bul. 285.

Fuels, alcohol-gasoline, Idaho Bul. 204.

Fumigation and spraying, for red scale on lemons, Calif. Bul. 583.

Fungicides—

- analyses, N. J. Bul. 556, 577.
- composition, Conn. (State) Bul. 346.
- See also Bordeaux mixture; Burgundy mixture; Lime-sulphur.

Fusarium annuum, N. Mex. Bul. 216; 223.

Fusarium lycopersici, Md. Bul. 345.

Fusarium niveum, cause of watermelon wilt, W. Va. Bul. 257.

Fusarium orthoceras, Wis. Bul. 424.

Fusarium vasinfectum, Ark. Bul. 308.

Fusarium wilt, tomatoes, Md. Bul. 345.

Galactin, effect on lactation, Mo. Res. Bul. 196.

Gall making insects, on trees and shrubs, Mich. Spec. Bul. 243.

Gallinaceous birds, yeast-like fungi from, Conn. (Storrs) Bul. 188.

Game animals—

- diseases and parasites, Oreg. Bul. 322.
- identification of parts of, Oreg. Bul. 322.

Game birds, artificial incubation, N. Y. (Cornell) Bul. 616.

Gardens—

- flower, Colo. Bul. 408.
- rock, and rock garden plants, Mich. Spec. Bul. 223 and supplement.

Garget. See Mastitis.

Gases, in tree stems, Minn. Tech. Bul. 99.

Gasoline and alcohol as engine fuels, Idaho Bul. 204.

Gelatine, action of proteolytic enzymes upon, Ind. Bul. 385.

Genesee County—

- mobility of rural families, N. Y. (Cornell) Bul. 607.
- relationships of open-country population to villages and cities, N. Y. (Cornell) Bul. 583.
- soils, crops, and pastures, N. Y. (Cornell) Bul. 567.

Genetic nature of induced mutations in plants, Mo. Res. Bul. 204.

Germicides, chlorine, use on dairy farms, Vt. Bul. 369.

Ginseng, Alternaria blight, Ohio Bul. 522.

Girls—

- activities and problems, N. Y. (Cornell) Bul. 617.
- farm, income, savings, and work, N. Y. (Cornell) Bul. 560.

Gladiolus—

- forcing outdoors with electricity, Calif. Bul. 584.
- storage temperatures and growth, Iowa Res. Bul. 170.
- thrips, control, Ohio Bul. 537.

Gloeodes pomigena, Va. Tech. Bul. 50.

Glypta rufiscutellaris, larval parasite of oriental fruit moth, N. Y. State Tech. Bul. 217.

Goats, lungworm in, Oreg. Bul. 327.

Golf courses, grasses, management, R. I. Bul. 245.

Gooseberries—

- preserving, N. Dak. Bul. 267.
- varieties, breeding, culture, N. Dak. Bul. 267.

Government—

- and taxation, Crittenden and Livingston counties, Ky. Bul. 355.
- costs in rural towns, N. Y. (Cornell) Bul. 598.
- county, Colo. Bul. 413.

Government—Continued.

- county consolidation, Colo. Bul. 406.
- county, costs, Pa. Bul. 297.
- town, and community areas, N. Y. (Cornell) Bul. 555.

Grafting—

- and budding, nut trees, N. Y. (Cornell) Bul. 573.
- apple trees, effect of scion on root, N. Y. State Tech. Bul. 218.
- apple trees, frost injured, N. Y. (Cornell) Bul. 556.

Grain—

- and flax varieties, S. Dak. Bul. 291.
- and supplements, fattening fall pigs, Mont. Bul. 284.
- as supplement to pasture and roughage for milk production, La. Bul. 241.
- beetle, saw-toothed, as rice mill pest, Ark. Bul. 309.
- feeding beef calves, La. Bul. 249.
- grinding, for calves, Ind. Bul. 373.
- grinding, for dairy cows, Ind. Bul. 372.
- handling in farmers' elevators, S. Dak. Bul. 282.
- hedging, by farmers' elevators, N. Dak. Bul. 272.
- in dairy cow feeding, Mont. Bul. 293.
- in lamb feeding, S. Dak. Bul. 278.
- in rations for calves, Md. Bul. 354.
- inspection laboratory, work, Mont. Bul. 270.
- seed, dormancy in, Colo. Tech. Bul. 5.
- sorghum. *See* Sorghum.
- vs. roughage without grain for dairy cows, Wyo. Bul. 202.

See also Cereals.

- Grande Ronde Valley soils, fertility, Oreg. Bul. 311.
- Grape farms, economic study, N. Y. (Cornell) Bul. 605.

- Grape juice, muscadine, analysis, Ga. Bul. 185.

Grapes—

- arrangement and density of vines, Calif. Hilgardia, vol. 8, no. 6.
- cost of production, Mich. Spec. Bul. 242.
- culture, Minn. Bul. 297.
- insects, Mich. Spec. Bul. 239.
- marketing, Calif. Bul. 558.
- muscadine, culture, varieties, Ga. Bul. 185.
- production, N. Y. (Cornell) Bul. 605.
- pruning, effect on growth and production, Ill. Bul. 393.
- Tokay, marketing, Calif. Bul. 558.

- Grapholita molesta*, Conn. (State) Bul. 353, 356; Del. Bul. 184; Md. Bul. 364; N. Y. State Bul. 635; Tech. Bul. 217; Pa. Bul. 301.

- Grass, dried artificially, feeding value, Vt. Bul. 350, 359, 368.

Grasses—

- at Archer field station, Wyo. Bul. 195.
- pasture, chemical composition, Vt. Bul. 362.
- pasture, composition, Mass. Bul. 300.
- pasture, composition and growth, effect of cutting and fertilizers, Fla. Bul. 269.
- putting greens, management, R. I. Bul. 245.
- weed, of Nebraska, Nebr. Bul. 288.

* *See also* Bluegrass; Colonial bent; Napier grass; Redtop.

Grasshoppers—

- arsenic poisoned, effect on birds, Okla. Bul. 218.

- bait tests, Colo. Tech. Bul. 7.

- Grazing crops for poultry, N. C. Bul. 282.

- Green manure, rye as, effect on liberation of plant nutrients, Va. Tech. Bul. 53.

- Green stinkbug, history and control, Va. Bul. 294.

Greenhouses—

- artificial radiation for forcing, Ind. Bul. 380.
- pests, control, Mo. Bul. 342.
- use of old soil for roses and carnations, Ill. Bul. 400.

- Groundsel, poisonous to cattle, Tex. Bul. 481.

- Groundwater, principles governing its physical control, Utah Bul. 252.

- Growth and development, domestic animals, Mo. Res. Bul. 180, 189, 190, 191, 192, 193, 208, 209, 220.

- Grub in the head, in sheep, Nev. Bul. 135.

- Grundy silt loam. *See* Soils.

Guinea pig—

- mammary gland, development, Mo. Res. Bul. 194, 206.

- nutritional requirements, Mo. Res. Bul. 219.

- Gum production, by *Rhizobium* spp., Iowa Res. Bul. 158.

- Gymnosporangium juniperi-virginianae*, Iowa Res. Bul. 166.

- Gymnosporangium*, pathogenicity and development, Iowa Res. Bul. 166.

- Gypsum, supplement to concentrated fertilizer, N. C. Bul. 299.

- Haemonchus contortus*, N. C. Bul. 287.

- Hairy root of apple, N. Y. State Bul. 638.

- Ham, home-cured, hydrolysis of fat, Md. Bul. 350.

- Hardwood forests. *See* Forests, hardwood.

- Harmolita* spp., Utah Bul. 243.

- Hatchability, in domestic fowl, Mo. Bul. 341.

Hay—

- alfalfa. *See* Alfalfa hay.

- alfalfa-timothy, for dairy farm, Ohio Bul. 538.
- artificially dried young grass, feeding value, Vt. Bul. 350, 359, 368.

- cereal, for Ohio, Ohio Bul. 543.

- crops, for Maryland soils, Md. Bul. 362.

- feeding dairy cows, Ohio Bul. 533.

- grass, and cottonseed hulls for milk production, compared, La. Bul. 238.

- in stacks, determining tonnage, Calif. Bul. 570.
- lands, "run out", fertilizer experiments, N. H. Bul. 271.

- palatability, Wyo. Bul. 199.

- permanent grass, for sandy soils, Md. Bul. 362.
- production, Ohio Bul. 538.

- production, management and costs, N. H. Bul. 273.

- range, digestion trials, range cattle, N. Mex. Bul. 212.

- soybean, machine-dried, for fattening cattle, La. Bul. 257.

- Health, farm families, N. Y. (Cornell) Bul. 563.

- Heart rot, date palm, Ariz. Tech. Bul. 48.

- Hedging grain, farmers' elevators, N. Dak. Bul. 272.

- Hegari toddler, ground, for fattening lambs, N. Mex. Bul. 222.

Heifers—

- cottonseed meal feeding, N. Mex. Bul. 226.
- dairy, cost and efficiency in raising, Oreg. Bul. 324.

fattening on alfalfa pasture, Nebr. Bul. 251.

Heliothis obsoleta, Md. Bul. 348; Va. Tech. Bul. 47, 55.

Helminthosporium gramineum, Wis. Res. Bul. 116.

Helminthosporium gramineum, physiologic specialization and variation in, Minn. Tech. Bul. 95.

Helminthosporium ocellum, Fla. Bul. 267.

Helminthosporium papulosum, W. Va. Bul. 260.

Hematology of avian typhoid, N. C. Tech. Bul. 44.

Hematopoietic function in deficiency diseases, Ark. Bul. 286.

Hemophilus gallinarum, R. I. Bul. 244.

Hens—

- egg production, feed purchasing power of, Mo. Bul. 337.
- egg weight, Mo. Bul. 332.

factors affecting hatchability of eggs, Kans. Tech. Bul. 37.

feeding devices, Md. Bul. 367.

inadequate rations, effect on eggs, Kans. Tech. Bul. 34.

laying, phosphorus requirements, Wash. Bul. 306.

laying, vitamin D requirements, Pa. Bul. 303.

oviduct fluke, Minn. Tech. Bul. 98.

Rhode Island Reds, nonbroody and intense broody, Mass. Bul. 301.

rice and rice byproducts for, La. Bul. 243.

ventilation in poultry houses for, N. Y. (Cornell) Bul. 558.

vitamin A requirement for egg production, Tex. Bul. 493.

"weigh-back" system for feeding, Md. Bul. 367.

wheat and wheat byproducts for, S. Dak. Bul. 284.

See also Eggs; Pullets.

Heptylic acid, toxicity to mosquito larvae, N. H. Tech. Bul. 58.

Herbage, pasture, composition, Mass. Bul. 300.

Hercotrips fasciatus, Calif. Hilgardia, vol. 7, no. 12.

Heredity—

- beans, rust resistance, Va. Tech. Bul. 51.
- cabbage, characters, Del. Bul. 190.
- oats, reaction to diseases, Minn. Bul. 102.
- sheep, multinipple trait, N. H. Tech. Bul. 53.
- sheep, wool in crossbreds, Wyo. Bul. 196.
- snapdragon, resistance to rust, Calif. Hilgardia, vol. 8, no. 7.

Herkimer County, soil, field-crop, and pasture management, N. Y. (Cornell) Bul. 612.

Heterodera marioni, Calif. Hilgardia, vol. 7, no. 10.

Hexoses, in maple trees, Vt. Bul. 358.

Highways, county, administration, Colo. Bul. 413.

Hoemonchus contortus. See *Haemonchus contortus*.

Hog houses, plans and equipment, Tex. Bul. 486.

Hog reduction program and processing tax, Iowa Bul. 317.

Hogging off corn and sweetpotatoes, La. Bul. 236.

Holly Springs branch station, report, Miss. Bul. 302.

Holstein-Friesian cattle. See Cattle, Holstein-Friesian.

Home ownership, financing, N. J. Bul. 552.

Home refrigeration, methods, R. I. Bul. 239.

Homemakers. See Women, farm.

Homes—

- farm, investment in, Mo. Res. Bul. 218.
- farm, planning, furnishing, and landscaping, Mich. Spec. Bul. 251.

rural, of city workers and urban-rural migration, N. Y. (Cornell) Bul. 595.

See also Houses.

Homogenization, milk and cream, Pa. Bul. 287.

Honey, marketing, Calif. Bul. 554.

Horses—

- and mules, cottonseed meal for, Tex. Bul. 492.
- cost of power on farms, Ill. Bul. 395.

efficiency, different ages and body weights, Mo. Res. Bul. 209.

encephalomyelitis, Md. Bul. 369; Nev. Bul. 132.

energy cost of horizontal walking, Mo. Res. Bul. 208.

hemolytic streptococci, relation to streptococci of man, Ky. Bul. 338.

See also Colts.

Hotbeds, electric, for propagating woody cuttings, N. Y. (Cornell) Bul. 618.

Household pests, control, Tenn. Bul. 147.

Household tasks, energy cost, Wash. Bul. 282.

Houses—

- farm, planning, Ark. Bul. 306; Mich. Spec. Bul. 251; Oreg. Bul. 320.

See also Homes.

Housing—

- farm, conditions, Utah Bul. 249.

farm, conditions and needs, Ark. Bul. 305.

farm, status of, Iowa Res. Bul. 174.

Hudson Valley, marketing farm products, N. Y. (Cornell) Bul. 620.

Humus, forest soils, relation to forest litter, N. Y. (Cornell) Mem. 166.

Husbands, rural, changes in residence and occupation, N. Y. (Cornell) Bul. 607.

Hydrocyanic acid gas, effect on cucumber plants, Mass. Bul. 303.

Hypera posticus, Calif. Bul. 567; Colo. Bul. 399.

Ice, in air-cooled storage, Ind. Bul. 379.

Ice cream—

- aging temperatures, Mass. Bul. 302.

aging treatment, effect on bacterial count, Mass. Bul. 314.

body and texture, Ind. Bul. 375.

chocolate, experiments, Mo. Res. Bul. 185.

freezers, sterilization, N. Y. State Bul. 628.

frozen fruit for, N. Y. State Bul. 634.

industry, Vt. Bul. 363.

nut, sandiness in, Mo. Res. Bul. 181.

physical and crystalline structure, relation to freezing and composition of mixture, Mo. Res. Bul. 215.

strawberry, stale metallic flavor, Ill. Bul. 407.

Idaho agricultural experiment station, report, Idaho Bul. 197, 205.

Idaho Falls area, profitable systems of farming, Idaho Bul. 198.

Income—

- and cost of living, farm families, N. Dak. Bul. 271.

and farm management, Wis. Bul. 429.

dairy farmers, Minn. Bul. 314.

family, and farm organization, Ky. Bul. 351.

Income—Continued.

- farm boys and girls, N. Y. (Cornell) Bul. 560.
- farm, family cash contribution by homemakers, Vt. Bul. 355.
- from part-time farming, Calif. Bul. 581.

Incubation—

- electrical, effect of current interruption, Calif. Bul. 550.
- game birds, artificial, N. Y. (Cornell) Bul. 616.
- turkey eggs, Nebr. Res. Bul. 74.
- See also* Eggs, incubation.

Incubators, bacteriological, temperature variations in, N. Y. State Tech. Bul. 213.

Index—

- for rating value of soils, Calif. Bul. 556.
- numbers, farm prices, Calif. Bul. 569; Idaho Bul. 210.
- of farm real estate taxes, Ky. Bul. 352.

Industrial families, cost of living, Ga. Bul. 180.

Infants, practices in feeding, N. Y. (Cornell) Bul. 610.

Infectious bovine mastitis. *See* Mastitis.

Infectious laryngotracheitis—

- immunology, Mass. Bul. 295.
- vaccination, Mass. Bul. 311.

Infectious rhinitis, of fowls, hemophilic bacillus as cause, R. I. Bul. 244.

Inflation and deflation, effect on agriculture, Nebr. Res. Bul. 71.

Inheritance. *See* Heredity.

Inoculation—

- alfalfa, Iowa Bul. 305.
- of legumes. *See* Legumes, inoculation.
- soybeans, Iowa Bul. 298.

Inorganic elements and plant cell size and structure, Vt. Bul. 383.

Insect eggs, petroleum oil penetration, N. H. Tech. Bul. 60.

Insecticidal oils, penetration into porous solids, Calif. Hilgardia, vol. 8, no. 2.

Insecticides—

- analyses, N. J. Bul. 556, 577.
- composition, Conn. (State) Bul. 346.
- contact, methods of expressing toxicity, N. H. Tech. Bul. 58.
- contact, new technic for appraisal, N. H. Tech. Bul. 54.
- contact, studies, N. H. Tech. Bul. 54, 58, 60.
- cube root, N. J. Bul. 581.
- derris, N. J. Bul. 576, 581.
- pyrethrum, N. H. Tech. Bul. 54.

Insects—

- effect of radio waves, N. J. Bul. 568.
- fruit, Ky. Bul. 353.
- fruit, tar distillate emulsions for control, N. Y. State Bul. 636.
- fruit trees, dormant sprays, Oreg. Bul. 321.
- grapes, Mich. Spec. Bul. 239.
- greenhouse, Mo. Bul. 342.
- household, Tenn. Bul. 147.
- Montana, Mont. Bul. 294.
- plant, Conn. (State) Bul. 344.
- plant, quarantines against, Calif. Bul. 553.
- potato tubers, N. Y. (Cornell) Bul. 569.
- reaction to concentrated chemicals, N. H. Tech. Bul. 54.
- report on, Conn. (State) Bul. 349, 360.

Insects—Continued.

- stone fruit, Mich. Spec. Bul. 244.
- tobacco, Conn. (State) Bul. 350.
- toxicity of derris, N. J. Bul. 576.
- trees and shrubs, Mich. Spec. Bul. 238, 243.

Insurance, farm families, Mich. Tech. Bul. 133.

Irish potatoes. *See* Potatoes.

Iron and copper content of egg yolk, Ky. Bul. 342.

Irrigated seed potatoes, Mont. Bul. 279.

Irrigation—

- and drainage districts, financial rehabilitation, Ariz. Bul. 144.
- corn, Wash. Bul. 278.
- cotton, N. Mex. Bul. 220.
- cotton growing under, Tex. Bul. 494.
- current meters, Colo. Tech. Bul. 3.
- potatoes, N. Mex. Bul. 218.
- project, Milk River, Mont. Bul. 290.
- prunes, Calif. Bul. 573.
- pump, investigations, Nebr. Bul. 282.
- vegetables, Iowa Bul. 308.
- wheat, Colo. Bul. 404; Tech. Bul. 11.
- See also* Drainage; Water.

Jack rabbits, life history and ecology, relation to grazing, Ariz. Tech. Bul. 49.

Japanese flowering crabapples, Sieboldii group, N. Y. State Tech. Bul. 214.

Japanese food, Hawaii Bul. 68.

Jelly, fruit, role of pectin in, Del. Bul. 187.

Jenkins laboratory, dedication, Conn. (State) Bul. 345.

Jersey Redskin potatoes, Tenn. Bul. 148.

Jointworm flies, control, Utah Bul. 243.

Kentucky bluegrass. *See* Bluegrass, Kentucky.

Kitchens, equipment and arrangement, Vt. Bul. 375.

Knott County, farm organization and family income, Ky. Bul. 351.

Labor—

- and power, in crop production, Ind. Bul. 378.
- costs in crop production, Mo. Res. Bul. 197.
- requirements of farms, Pa. Bul. 292.

Laconia, retailing milk, N. H. Bul. 272.

Lactation—

- and growth, effect of vitamin B, Ark. Bul. 284.
- dairy cattle, and dry rations, Oreg. Bul. 329.
- effect of galactin, Mo. Res. Bul. 196.
- See also* Mammary gland.

Lake County, cut-over lands, Minn. Bul. 304.

Lakes, productiveness of fish food, Minn. Tech. Bul. 90.

Lambs—

- corn preparation, alfalfa, and silage for, Iowa Bul. 299.
- cost of marketing, Va. Bul. 288.
- diseases, feed lot, Colo. Bul. 409.
- fattening experiments, N. Dak. Bul. 274.
- fattening, feeding methods and rations for, Minn. Bul. 306.
- feeder, comparison, Pa. Bul. 288.
- feeding, Mich. Spec. Bul. 233; Okla. Bul. 213.
- feeding Atlas sorgo, Kans. Bul. 264.
- feeding, planning for, Colo. Bul. 405.
- grain rations and method of feeding, S. Dak. Bul. 278.
- ground corn fodder, corn silage, and ground hegari fodder for fattening, N. Mex. Bul. 222.

Lambs—Continued.

- linseed meal for growing and fattening, Pa. Bul. 307.
- statistical methods of analysis of feed lot gains, Colo. Tech. Bul. 10.
- stiff-lamb disease, N. Y. (Cornell) Bul. 603.
- stomach worms, sanitation in control, N. C. Bul. 287.

Land—

- burned-over, reseeding, Idaho Bul. 201.
- classification, Mo. Bul. 323.
- classification, and land type, Mich. Spec. Bul. 231.
- clearing, costs, Minn. Bul. 299.
- corporate-owned, Iowa Bul. 307.
- cut-over, Minn. Bul. 295, 304.
- farm, prices, history, Nebr. Res. Bul. 72.
- marginal, Ind. Bul. 376.
- marginal, problem, Mo. Bul. 323.
- resources, N. J. Bul. 552.
- tax delinquency, Ark. Bul. 311.
- use. *See* Land utilization.

Land utilization—

- and reduction of delinquency, N. J. Bul. 552.
- and types of farming, Wash. Bul. 288.
- as basis of rural economic organization, Vt. Bul. 357.
- conference, Mo. Bul. 323; N. J. Bul. 552.
- economic study, N. Y. (Cornell) Bul. 590.
- economic study, methods used, Tompkins County, N. Y. (Cornell) Mem. 160.
- El Dorado County, Calif. Bul. 572.
- for fruit production, Mich. Spec. Bul. 257.
- Montgomery County, N. Y. (Cornell) Bul. 613.
- policies and programs, N. J. Bul. 552.
- policy, Mo. Bul. 323.
- recreation and forestry, Mass. Bul. 294.
- recreational, Conn. (Storrs) Bul. 194; Mich. Spec. Bul. 247.
- soils for agriculture, N. J. Bul. 569.
- State program, N. J. Bul. 552.

Laphygma erigua, Fla. Bul. 271.

Lard—

- competitive position in fats and oils market, Iowa Res. Bul. 171.
- market, domestic and foreign, Iowa Bul. 320.
- market, domestic, improving, Iowa Bul. 319.
- use in cookery, Mo. Bul. 335.

Laryngotracheitis—

- infectious, immunology, Mass. Bul. 295.
- infectious, vaccination, Mass. Bul. 311.

Laspeyresia caryana, Fla. Bul. 258.

Lawn, management, Kans. Bul. 267.

Lead and arsenic spray residue removal. *See* Spray residue removal.

Lead residues on apples, Ind. Bul. 381; Pa. Bul. 304.

Leadership, negro, in rural life, Va. Bul. 290.

Leaf hoppers—

- beet, field observations, Calif. Hilgardia, vol. 7, no. 8.
- on alfalfa, injury and time of cutting, Ky. Bul. 348.
- transmission of aster and celery yellows by, Calif. Hilgardia, vol. 8, no. 10.

Leaf mold resistance in tomato, Ohio Bul. 539.

Leafy spurge—

- control, N. Dak. Bul. 277.
- life history and habits, N. Dak. Bul. 266.

Leasing systems, Md. Bul. 352.

Legume inoculant inspection, N. J. Bul. 550, 562.

Legumes—

- inoculation, Mo. Bul. 322.
- winter, experiments, Miss. Bul. 303.
- Lemons, red scale, spray-fumigation, Calif. Bul. 583.
- Lenticel infection of apples by *Penicillium expansum*, Wash. Bul. 298.
- Leptosphaeria coniothyrium*, N. C. Bul. 291.
- Lepus alleni* and *Lepus californicus* spp., Ariz. Tech. Bul. 49.
- Lespedeza sericea*, culture, Mo. Bul. 331.

Lettuce—

- bottom rot, N. Y. (Cornell) Mem. 158.
- on muck soils, N. Y. (Cornell) Bul. 564.
- seed, germination, laboratory, N. Y. State Tech. Bul. 222.

Leucosis and lymphomatosis of fowls, etiology and histogenesis, Va. Tech. Bul. 56.

Levees and drainage, in Missouri, Mo. Bul. 323.

Libraries, South Carolina, S. C. Bul. 292.

Light—

- and temperature, effect on methylene blue reduction test, Vt. Bul. 374.
- intensity, and fruit setting in cherry, Mich. Tech. Bul. 136.
- relation to photosynthesis, protein synthesis and translocation, Mich. Tech. Bul. 141.

Lights, for egg production, Wyo. Bul. 203.

Lima beans. *See* Beans, lima.

Lime—

- analyses, N. J. Bul. 551, 561, 582.
- burnt, limestone, dolomite, and calcium silicate, conservation in soil, Tenn. Bul. 152; Va. Tech. Bul. 54.
- for field crops on Berks shale soil, Va. Bul. 292.
- for soils, Md. Bul. 362; Oreg. Bul. 325.
- for soybeans, Iowa Bul. 298.
- need and use on soils, Vt. Bul. 371.
- on alfalfa, Iowa Bul. 305.
- on muck soils, N. C. Bul. 292.
- surface applied, penetration in soils of pastures, Conn. (Storrs) Bul. 186.

Lime-sulphur—

- for apple scab, N. Y. State Bul. 624.
- in control of tomato psyllid, Colo. Bul. 411.

Limestone—

- conservation in soil, Tenn. Bul. 152; Va. Tech. Bul. 54.
- effect on soils and crops, Ill. Bul. 405.
- on Toxaway loam and Porter's loam soils, N. C. Bul. 285.

Liming suspensions, and potential changes of peat soil, N. C. Tech. Bul. 47.

Linebreeding, in cattle, Iowa Bul. 301.

Linn County, costs in crop production, Mo. Res. Bul. 197.

Linseed meal, for lambs, Pa. Bul. 307.

Lipolytic bacteria in dairy products, Iowa Res. Bul. 169.

Lissorhoptrus simplex, Ark. Bul. 299.

Livestock—

- carload shipments, N. Dak. Bul. 262.
- cost of marketing, Va. Bul. 288.
- emergency feeding, N. Mex. Bul. 227.
- feeding, Mo. Bul. 330.
- marketing associations, Minn. Bul. 302.
- marketing by truck, Ky. Bul. 344; Mich. Spec. Bul. 235; Ohio Bul. 531.
- marketing, cooperative, Iowa Bul. 306.
- markets, in relation to corn-belt hog marketing, Ill. Bul. 408.
- motor transportation, Ohio Bul. 531.
- plant poisoning. *See* Plants poisonous to livestock.
- prices, Mich. Tech. Bul. 139.
- production, Newlands project, Nev. Bul. 130, 134.
- Livingston County, taxation and government, Ky. Bul. 355.
- Local group organization. *See* Rural organizations.
- Lower Rio Grande Valley, mixed carload distribution of vegetables, Tex. Bul. 497.
- Lumbering, economic significance of tree size, Calif. Bul. 549.
- Lungworms, in sheep and goats, Oreg. Bul. 327.
- Lygus* spp., life history and injury to beans, Idaho Res. Bul. 11.
- Lymphomatosis of fowls, etiology and histogenesis, Va. Tech. Bul. 56.
- Lysimeter—
 - experiments with liming materials, Tenn. Bul. 152; Va. Tech. Bul. 54.
 - investigations, N. Y. State Tech. Bul. 212.
- Machine, fruit washing, Wash. Bul. 285.
- Machinery—
 - and implements, farm, upkeep, Md. Bul. 362.
 - costs in crop production, Mo. Res. Bul. 197.
 - effect on farm organization, Mont. Bul. 278.
 - farm, use and expense, Ky. Bul. 345.
 - in control of corn borer, Pa. Bul. 284.
 - See also* Tractors; Windrow pick-up baler.
- Macrocentrus*, parasite of oriental fruit moth, Conn. (State) Bul. 356.
- Macrocentrus ancylicorvus*, N. Y. State Bul. 635.
- Macrosporium solani*, Colo. Bul. 402.
- Magnesium, on tobacco, Conn. (State) Bul. 350.
- Maine agricultural experiment station, report, Maine Bul. 369, 377.
- Maize—
 - haplo-viable deficiency in, Mo. Res. Bul. 204.
 - See also* Corn.
- Malacosoma americana*, N. J. Bul. 579.
- Malta fever. *See* Brucellosis.
- Mammary gland—
 - and udder, dairy cow, functional individuality, Mo. Res. Bul. 211.
 - development, cat and dog, Mo. Res. Bul. 207.
 - development in albino mouse, Mo. Res. Bul. 182.
 - development in albino mouse and guinea pig, Mo. Res. Bul. 206.
 - development, guinea pig, Mo. Res. Bul. 194.
 - growth, effect of galactin, Mo. Res. Bul. 196.
 - growth, effect of hormones, Mo. Bul. 339.
 - normal and experimental development, Mo. Res. Bul. 207.
 - See also* Lactation.

Man—

- streptococci, relation to streptococci of animals, Ky. Bul. 338.
- undulant fever, Mich. Mem. 1; Va. Tech. Bul. 48.
- Manganese—
 - and growth of green plants, N. Y. (Cornell) Mem. 151.
 - on Coastal Plain soils, Md. Bul. 362.
 - soil, and normal crops, R. I. Bul. 246.
- Mangels, for dairy cows, W. Va. Bul. 256.
- Manure—
 - effect on composition of alfalfa hay, Utah Bul. 247.
 - farm, effect on floats as fertilizers, N. Y. (Cornell) Bul. 574.
 - for corn, Tenn. Bul. 149.
- Maple sugar and cream, Vt. Bul. 364.
- Maple trees, carbohydrate content, Vt. Bul. 358.
- Marginal farm land, Ind. Bul. 376; Mo. Bul. 323.
- Market milk and butterfat, sources, Ohio Bul. 523.
- Market quality of eggs, N. Mex. Bul. 224.
- Marketing—
 - agricultural, compulsory proration, Calif. Bul. 565.
 - agricultural products, perishable, N. Y. (Cornell) Bul. 585.
 - and production, lard, fats, and oils, Iowa Res. Bul. 171.
 - and purchasing activities, farm bureau, Calif. Bul. 563.
 - apples, Del. Bul. 185.
 - apples, out of State, Mass. Bul. 299.
 - associations, livestock, Minn. Bul. 302.
 - carrots, La. Bul. 251.
 - cattle, N. Dak. Bul. 275.
 - cherries, Oreg. Bul. 310.
 - cooperative, associations, Fla. Bul. 263.
 - cooperative, eggs, Ind. Bul. 390.
 - cooperative, fruits, Calif. Bul. 557.
 - cooperative, livestock, Iowa Bul. 306.
 - corn, Iowa Bul. 313.
 - corn-belt hog, Ill. Bul. 408.
 - cotton, home market, N. C. Bul. 284.
 - cotton in the seed, Okla. Bul. 219.
 - cotton, price-quality relationships, Tex. Bul. 501.
 - cream, Ill. Bul. 396.
 - cream for butter, effect of time element on quality, Ind. Bul. 383.
 - crossies and piling, Ind. Bul. 395.
 - dairy products, Ind. Bul. 382.
 - eggs, Ind. Bul. 390; Mo. Bul. 329; N. Y. (Cornell) Bul. 596, 597; Ohio Bul. 536.
 - farm products, perishable, N. Y. (Cornell) Bul. 620.
 - flaxseed, and the tariff, Mont. Bul. 272.
 - fruits, history of cooperation, Calif. Bul. 557.
 - grain. *See* Elevators, farmers'.
 - grapes, Calif. Bul. 558.
 - hogs, corn-belt, Ill. Bul. 408.
 - hogs, shrinkage, Ill. Bul. 388.
 - honey, Calif. Bul. 554.
 - lard, Iowa Bul. 319, 320; Res. Bul. 171.
 - livestock, Iowa Bul. 306; Minn. Bul. 302.
 - livestock, by truck, Ky. Bul. 344; Mich. Spec. Bul. 235; Ohio Bul. 531.
 - livestock, carload shipment, N. Dak. Bul. 262.

Marketing—Continued.

- livestock, costs, Va. Bul. 233.
- milk, Maine Bul. 367.
- milk, fluid, Wis. Res. Bul. 125.
- milk, Fresno, Calif. Bul. 559.
- milk, retail, N. H. Bul. 272.
- milk, secondary markets and falling prices
Mass. Bul. 304.
- milk. *See also* Milk and cream, collection.
- peas, N. Y. (Cornell) Bul. 599.
- potatoes, consumer demand, Wis. Res. Bul.
124.
- poultry, Utah Bul. 244.
- redtop, Ill. Bul. 404.
- sweetpotatoes, Ind. Bul. 370.
- vegetables, Ind. Bul. 392; Tex. Bul. 497.

Markets—

- curb, Wilmington, Del. Bul. 191.
- lard, Iowa Bul. 319, 320; Res. Bul. 171.
- roadside, Md. Bul. 365; Ohio Bul. 521.

Massachusetts agricultural experiment station,
report, Mass. Bul. 293, 305.

Mastitis—

- bovine, laboratory detection, N. Y. State Bul.
626.
- bovine, methods of control, Conn. (Storrs) Bul.
197.
- bromthymol blue test in diagnosis, Conn.
(Storrs) Bul. 184.
- chronic, streptococci of, Conn. (Storrs) Bul. 195.
- detection in dairy herds, S. Dak. Bul. 290.
- diagnosis and control, N. Y. (Cornell) Bul. 579.
- paper test for detection, Ind. Bul. 377.

Meat—

- and bone scraps, nutritive value for chicks, N.
Mex. Bul. 221.
- See also* Bacon; Beef; Ham; Pork.

Mesilla Valley—

- cotton spacing experiments, N. Mex. Bul. 219.
- irrigation of Acala cotton, N. Mex. Bul. 220.

Metabolism—

- and body weight, Mo. Res. Bul. 220.
- cattle and sheep, Mo. Res. Bul. 180.
- effect of chicory and coffee, Mich. Tech. Bul.
138.
- nitrogen and energy, studies with white rats,
Mo. Res. Bul. 189, 190.
- nitrogen-fixing Clostridia, Iowa Res. Bul. 173.
- peach trees, effect of temperature, N. J. Bul. 567.

Meters, current, rating and use, Colo. Tech. Bul. 3.

Methylene blue reduction test—

- for grading cream, Minn. Bul. 310.
- light and temperature in, Vt. Bul. 374.

Microbiology of cheese-like flavors in butter, Minn.
Tech. Bul. 97.

Middle Rio Grande Conservancy District, farm
organization and cost of producing crops, N. Mex.
Bul. 215.

Migration—

- New York State, N. Y. (Cornell) Bul. 591.
- rural-urban, N. C. Bul. 295.

Milk—

- and butterfat, sources, Ohio Bul. 523.
- and cream, collection, economic study, Maine
Bul. 373.
- and cream, collection route, cost and returns,
Maine Bul. 374.

Milk—Continued.

- and cream, consumption in Minneapolis, Minn.
Bul. 311.
- and cream, homogenization, Pa. Bul. 287.
- and cream, prices, as related to pay rolls, Ill.
Bul. 397.
- bacterial counts, N. H. Tech. Bul. 57.
- bacterial flora, Vt. Bul. 377; W. Va. Bul. 255.
- bacteriological incubators, N. Y. State Tech.
Bul. 213.
- colon organisms in, N. H. Tech. Bul. 57.
- consumption and prices, as related to industrial
pay rolls, Ill. Bul. 397.
- contamination by dairy utensils, Iowa Bul. 300.
- coolers, efficiency, Oreg. Bul. 331.
- cost of production, N. C. Bul. 288; Oreg. Bul.
318; R. I. Bul. 241.
- disturbances in natural oxidation-reduction
equilibrium and use of dehydrated milks in
cottage cheese, Mo. Res. Bul. 216.
- effect of removing foremilk on fat content, N. Y.
(Cornell) Bul. 589.
- flora, effect of temperature, Vt. Bul. 377.
- fluid, economic considerations in marketing,
Wis. Res. Bul. 125.
- freezing, effect on physical and nutritional
properties, Md. Bul. 344.
- market, Fresno, analysis, Calif. Bul. 559.
- marketing. *See* Marketing, milk.
- markets, secondary and falling prices, Mass.
Bul. 304.
- methylene blue reduction test, Vt. Bul. 374.
- nutritive value, Ohio Bul. 518.
- "oxidized" flavors of, N. Y. (Cornell) Bul. 606.
- pasteurization, bacterial flora before and after,
W. Va. Bul. 255.
- pasteurization, effect on nutritive properties,
Ohio Bul. 518.
- pasteurized flavor and creaming, as affected by
temperature and pasteurizer linings, N. Y.
State Tech. Bul. 223.
- pasteurized, thermophilic bacteria in, N. Y.
State Bul. 630.
- pasteurizer, bacteriological studies, N. Y.
State Tech. Bul. 207.
- pasteurizers, N. Y. State Tech. Bul. 211.
- production, alfalfa hay for, Oreg. Bul. 328.
- production and fat test of cows, effect of season
on, Nev. Bul. 131.
- production and utilization, Maine Bul. 367.
- production, corn silage for, Ill. Bul. 391.
- production, cottonseed hulls and hay for, com-
pared, La. Bul. 238.
- production, effect of calcium deficient rough-
ages, Fla. Bul. 262.
- production, effect of planes of protein intake on,
N. Y. (Cornell) Bul. 578.
- production, effect of type of farming and feeding
methods, Del. Bul. 190.
- production, feeding with and without grain for,
Mont. Bul. 293.
- production, grain as supplement to pasture and
roughage for, La. Bul. 241.
- production, seasonal variation and basic rating
plan, Vt. Bul. 353.
- production. *See also* Dairying.

Milk—Continued.

- proteins of, action of proteolytic enzymes on, Ind. Bul. 385.
- retailing in Laconia, N. H. Bul. 272.
- ropy, controlling outbreaks, N. Y. State Bul. 631.
- sampling, methods, Pa. Bul. 310.
- secretion, effect of fat intake, N. Y. (Cornell) Bul. 593.
- secretion. *See also* Lactation.
- soft-curd, Pa. Bul. 312.
- standardized, vitamin A content, Nebr. Res. Bul. 69.
- tallowiness, Ill. Bul. 389.
- temperature, and strainer capacity, N. Y. State Bul. 639.
- use of chlorine germicides in dairy utensils, Vt. Bul. 369.

See also Buttermilk; Cream; Skim milk.

Milk River irrigation project, agriculture, Mont. Bul. 290.

Milking, removing foremilk, effect on fat content, N. Y. (Cornell) Bul. 539.

Milo vs. wheat for dairy cows, Tex. Bul. 480.

Minerals—

- effect on onions, N. Y. (Cornell) Bul. 552.
- feeds, Oreg. Bul. 309.
- in range cattle feeding, N. Mex. Bul. 214.
- supplements to cottonseed meal and range hay, range cattle feeding, N. Mex. Bul. 212.
- Minneapolis, consumption of dairy products in, Minn. Bul. 311.

Mississippi agricultural experiment station, Holly Springs branch, report, Miss. Bul. 302.

Missouri agricultural experiment station, report, Mo. Bul. 328, 340.

Molasses—

- cane, as supplement in swine fattening, Hawaii Bul. 69.
- cane, for dairy cows, Hawaii Bul. 73.
- cane, for poultry, Hawaii Bul. 67.
- steer feeding, N. Mex. Bul. 211.

Molds—

- in bread, Minn. Bul. 296.
- in germinating seed corn, S. Dak. Bul. 275.
- Monilia* spp., in thrush affections of birds, Conn. (Storrs) Bul. 188.

Montana grain inspection laboratory, work, Mont. Bul. 270.

Montgomery County, Maryland, dairy farm management study, Md. Bul. 356.

Montgomery County, New York, land utilization, N. Y. (Cornell) Bul. 613.

Moose, diseases, Minn. Bul. 294, 308.

Morning-glory, wild. *See* Bindweed.

Mortgages—

- farm, economic analysis, Iowa Res. Bul. 156.
- farm, history, 1870-1932, Nebr. Res. Bul. 67.
- farm, policy, Iowa Bul. 315.
- farm, refinancing, Iowa Bul. 311.
- foreclosed, Mo. Bul. 323.

Mosaic—

- raspberries, N. Y. State Bul. 625.
- tobacco, N. C. Bul. 297.
- tobacco, spread, effect of contaminated soil and cultural practices, N. C. Tech. Bul. 46.
- tomatoes, Md. Bul. 345.

Mosquito control problem, Del. Bul. 181.

Mosquito larvae, toxicity of nicotine, heptylic acid, and caproic acid to, N. H. Tech. Bul. 58.

Mosquitoes, of Montana, Mont. Bul. 288.

Motor trucks. *See* Trucks.

Motorized equipment, spark arresters, Calif. Bul. 577.

Mouse, albino, development of mammary gland, Mo. Res. Bul. 182, 206.

Muck soils. *See* Soils.

Mulch paper, in vegetable production, Minn. Bul. 298.

Mulching, vegetables, Nebr. Bul. 278.

Mules, cottonseed meal for, Tex. Bul. 492.

Multinipple trait, inheritance in sheep, N. H. Tech. Bul. 53.

Mushrooms, edible and poisonous, N. Dak. Bul. 270.

Mutations in plants, induced, Mo. Res. Bul. 204.

Mycorrhizas, pecan, Ga. Bul. 178.

Mycosphaerella fragariae, La. Bul. 252.

Mycosphaerella lethalis, Ky. Bul. 339.

Myzus cerasi, N. Y. State Bul. 637.

Myzus fragae-folii, as vectors of crinkle disease, Oreg. Bul. 319.

Napier grass, as pasture and fodder crop, Hawaii Bul. 72.

Nassau County—

soil, field crop, and pasture management, N. Y. (Cornell) Bul. 600.

vegetable production, N. Y. (Cornell) Bul. 611.

National economic planning for agricultural recovery, Iowa Bul. 313.

National farm plant, Iowa Bul. 314.

Nectaria spp., W. Va. Bul. 261.

Negroes—

life in rural Virginia, Va. Bul. 295.

organizations and leadership in rural life, Va. Bul. 290.

Nematodes—

parasite of sheep, Va. Tech. Bul. 52.

root-knot. *See* Root-knot nematodes.

Nemocera, descriptions, N. Y. (Cornell) Mem. 164.

Nerve degeneration and avitaminosis in rats, Ohio Bul. 545.

Net energy and specific dynamic action problems, Mo. Res. Bul. 193.

Neurolymphomatosis and related diseases, studies, Mass. Bul. 308.

Neutral sulphur excretion as function of body weight, Mo. Res. Bul. 220.

New Hampshire agricultural experiment station, report, N. H. Bul. 270, 280.

New Jersey land use conference, N. J. Bul. 552.

Newfane-Olcott area, Niagara County, costs and returns in producing apples, N. Y. (Cornell) Bul. 565.

Newlands project, crop and livestock production, Nev. Bul. 130, 134.

Nicotine—

supplements, spray value for aphids, N. Y. State Tech. Bul. 210.

toxicity to mosquito larvae, N. H. Tech. Bul. 58.

Nile-blue sulphate, in determination of lipolytic bacteria in dairy products, Iowa Res. Bul. 169.

Nitrate fertilization, effect on pasture grasses, Fla. Bul. 269.

Nitrate nitrogen—

- and carbohydrate and nitrogen content of onions, N. Y. (Cornell) Mem. 156.
- on cotton, effect on fruiting, and organic constituents, Ga. Bul. 182.

Nitrate of soda. *See* Sodium nitrate.

Nitric nitrogen, in Arkansas Valley, soils, Colo. Tech. Bul. 6.

Nitrogen—

- and carbohydrate content of onions, N. Y. (Cornell) Mem. 156.
- and energy metabolism studies with rats, Mo. Res. Bul. 189, 190.
- and water relations, crop rotations, lysimeter experiments, N. Y. State Tech. Bul. 212.
- content of tomato, variation in, Ark. Bul. 288.
- creatinine and energy metabolism of white rats, Mo. Res. Bul. 189.
- effect on development of potato plant with different temperatures and photoperiods, Nebr. Res. Bul. 75.
- effect on keeping quality of fruit, Md. Bul. 366.
- effect on tomato, Ark. Bul. 310.
- effect on wheat, Wash. Bul. 296.
- fixing Clostridia, metabolism, Iowa Res. Bul. 173.
- fractions in juice of beet leaves, R. I. Bul. 242.
- intake, dairy cattle, partition between growth, milk secretion, and urinary excretion, Mo. Res. Bul. 192.
- on apple trees, Wis. Bul. 427.
- soil, under semiarid conditions, Okla. Bul. 215.

Nitrogenous fertilizers. *See* Fertilizers, nitrogenous.

North Carolina agricultural experiment station, current investigations, projects, N. C. Bul. 294.

North Platte experimental substation, dry land crop production, Nebr. Bul. 279.

Norway spruce, spruce gall aphid on, N. Y. State Tech. Bul. 225.

Nursery plantings, spruce gall aphid in, N. Y. State Tech. Bul. 225.

Nut ice cream, sandiness in, Mo. Res. Bul. 181.

Nutrition—

- deficiency diseases and utilization of fishery products in, Maine Bul. 375.
- dietary requirements for fertility and lactation, Ark. Bul. 284.
- feeding of infants, N. Y. (Cornell) Bul. 610.

See also Animals, nutrition; Food; Vitamin.

Nutritional properties of milk, effect of freezing, Md. Bul. 344.

Nutritional requirements—

- chicks, Mo. Res. Bul. 198.
- rabbits and guinea pigs, Mo. Res. Bul. 219.

Nutritive value of milk, Ohio Bul. 518.

Nuts—

- culture and propagation, N. Y. (Cornell) Bul. 573.

See also Pecans; Walnuts.

Oak forests, growth and yield, Pa. Bul. 283.

Oat feed as substitute for roughage, S. Dak. Bul. 281.

Oats—

- for fattening cattle, Ind. Bul. 371.
- inheritance of reaction to disease, Minn. Tech. Bul. 102.

Oats—Continued.

- production, Ark. Bul. 301.
- stored, heating and respiration, Iowa Res. Bul. 165.
- variety and production studies, Ark. Bul. 301.
- variety tests, Md. Bul. 347.

Occupational mobility, farmers, S. C. Bul. 296.

Occupational mobility, rural husbands and wives, N. Y. (Cornell) Bul. 607.

Oestrus ovis, Nev. Bul. 135.

Ohio agricultural experiment station, report, Ohio Bul. 516, 532.

Oidium spp., in thrush affections in birds, Conn. (Storrs) Bul. 188.

Oil—

- emulsions, Volk and Orthol-K, for oriental fruit moth, Del. Bul. 184.
- markets, competitive position of lard in, Iowa Res. Bul. 171.
- of chenopodium, eradication of roundworms in swine, S. Dak. Bul. 283.
- petroleum, penetration into insect eggs, N. H. Tech. Bul. 60.
- spraying, tank-mixture method, fruit trees, Calif. Bul. 579.
- sprays, fruit trees, Oreg. Bul. 321.
- sprays, penetration into porous solids, Calif. Hilgardia, vol. 8, no. 2.

Olive trees, pruning, Calif. Bul. 568.

Onions—

- breeding methods, Calif. Hilgardia, vol. 7, no. 16.
- carbohydrate and nitrogen content, relation of nitrate nitrogen to, N. Y. (Cornell) Mem. 156.
- effect of minerals on color and scales, N. Y. (Cornell) Bul. 552.
- resistance to thrips, Calif. Hilgardia, vol. 8, no. 7.
- storage, quality and price trends in relation to, Ind. Bul. 393.

Onondaga County, country population relationships, N. Y. (Cornell) Bul. 584.

Oranges, thinning, Calif. Bul. 576.

Orchard performance, relation to chemical and physical properties of soils, N. Y. (Cornell) Bul. 575.

Orchards—

- apple. *See* Apple orchards.
- management, N. Mex. Bul. 209.
- oxidation-reduction potential in evaluating soils for, N. Y. (Cornell) Bul. 592.
- soil fertility experiments, Pa. Bul. 294.
- soil management, N. Y. State Bul. 629.
- soil solution, effect of cover crops, Calif. Hilgardia, vol. 7, no. 14.
- soils and cover crops, N. Y. State Bul. 632.
- soils, phosphorus distribution and acidity, Ohio Bul. 517.
- walnut, establishing, Oreg. Bul. 315.

Oregon agricultural experiment station, report, Oreg. Bul. 334.

Organic matter accumulations, in soil, Okla. Bul. 216.

Organizations, rural. *See* Rural organizations.

Oriental fruit moth—

- baits for, Pa. Bul. 301.
- biological control, Conn. (State) Bul. 353, 356; N. Y. State Bul. 635; Tech. Bul. 217.
- history and control, Md. Bul. 364.
- oil emulsions for, Del. Bul. 184.
- parasites, Conn. (State) Bul. 353, 356; N. Y. State Bul. 635.
- parasites, *Glypta rufiscutellaris*, N. Y. State Tech. Bul. 217.

Orleans area, dairy farming, Vt. Bul. 376.

Ornamental trees, Fla. Bul. 261.

Ornamentals. *See* Crabapples; Flowers; Shrubs.

Oryzaephilus surinamensis, Ark. Bul. 309.

Ostertagia circumcincta, life history, Va. Tech. Bul. 52.

Oxidation-reduction potential in evaluating soils for orchard purposes, N. Y. (Cornell) Bul. 592.

Palm, date, heart rot, Ariz. Tech. Bul. 48.

Paper—

- mulch, in vegetable production, Minn. Bul. 298.
- test for detection of mastitis, Ind. Bul. 377.

Parasites, and parasitic diseases, cattle, P. R. Bul. 36.

Paratiroa cockerelli, Colo. Bul. 410, 411.

Part-time farming—

- and small scale farming, Md. Bul. 357.
- for income, Calif. Bul. 581.

Pasteurization, cream, effect on flavor and viscosity, N. Y. State Tech. Bul. 224.

Pasteurized milk—

- flavor and creaming, as affected by temperature and pasteurizer lining, N. Y. State Tech. Bul. 223.
- thermophilic bacteria in, N. Y. State Bul. 630.

Pasteurizer—

- bacteriological studies, N. Y. State Tech. Bul. 207.
- dairy, stainless steel and glass-lined, heat transfer, N. Y. State Tech. Bul. 211.

Pasture grasses. *See* Grasses, pasture.

Pastures—

- bluestem, effect of burning, Kans. Tech. Bul. 38.
- carrying capacity, Wash. Bul. 295.
- chemical composition of herbage, Mass. Bul. 300.
- effect of grazing, rotational and continuous compared, Wash. Bul. 294.
- fattening pigs, N. C. Bul. 286.
- fertilization and rotation, N. J. Bul. 564.
- fertilizer test, Mass. Bul. 306.
- fertilizers, effect on production, Conn. (Storrs) Bul. 189.
- improvement and management, N. Y. (Cornell) Bul. 567, 570, 600, 612.
- in Iowa farming, Iowa Bul. 323.
- investigations, Conn. (Storrs) Bul. 186, 187, 189, 190.
- lime and fertilizer experiments, N. J. Bul. 565.
- management, Ark. Bul. 307; N. Y. (Cornell) Bul. 567, 570, 600, 612.
- permanent, effect of fertilizers on vegetation, Conn. (Storrs) Bul. 187.

Pastures—Continued.

- permanent, management, Ark. Bul. 307.
- permanent, penetration of lime and phosphates in soil of, Conn. (Storrs) Bul. 186.
- résumé of thirteen years of research, Conn. (Storrs) Bul. 190.
- soils. *See* Soils, pasture.
- southern Delaware, investigations, Del. Bul. 189.
- Sudan grass for, Mich. Spec. Bul. 240.
- yields, measuring, with dairy cattle, Wash. Bul. 295.

Pea feed and byproducts for dairy cows, Wash. Bul. 287.

Peach trees, effect of temperature on growth and metabolism, N. J. Bul. 567.

Peaches—

- Sunbeam, nonbrowning, oxidase system, N. Y. State Tech. Bul. 219.
- thinning, Ohio Bul. 541.

Peanuts, culture, N. C. Bul. 281.

Pear borer, sinuate, feeding habits, N. Y. State Bul. 648.

Pear industry, status and trends, Mich. Spec. Bul. 232.

Pear thrips, emergence, in Healdsburg area, Calif. Bul. 562.

Pear trees—

- dormant sprays, Ore. Bul. 321.
- fire blight, Ark. Bul. 283; Calif. Bul. 586; N. Y. (Cornell) Bul. 557.

Pears—

- production, Mich. Spec. Bul. 232.
- spray residue removal, Ore. Bul. 317.
- winter, biochemical investigations, Ore. Bul. 316.

Peas—

- diseases, Ariz. Bul. 142.
- enlargement, and root-rot, N. Y. State Bul. 621.
- handling methods, effect on quality, N. Y. (Cornell) Bul. 599.
- photosynthesis, protein synthesis and translocation, and light, potassium and calcium deficiencies, Mich. Tech. Bul. 141.
- root rot, N. Y. State Bul. 621; Wis. Bul. 424.
- shelled, carbohydrate changes in, N. Y. State Bul. 622.
- wilt and root rots, Wis. Bul. 424.

Peat deposits, character of, N. Y. (Cornell) Mem. 149.

Peat soils. *See* Soils, peat.

Pecan mycorrhizas, Ga. Bul. 178.

Pecan rosette, soil, chemical and physiological studies, Ariz. Tech. Bul. 47.

Pecan shuckworm, Fla. Bul. 258.

Pecan trees, root system, Ga. Bul. 176.

Pecans—

- budwood, storage and seasoning, Tex. Bul. 478.
- fertilizer experiments, Fla. Bul. 270.
- Pectic constituents, citrus fruits, Fla. Bul. 268.
- Pectin, physico-chemical properties, Del. Bul. 187.
- Penicillium expansum*, Wash. Bul. 298, 304.
- Pennisetum purpureum*, Hawaii Bul. 72.
- Pennsylvania agricultural experiment station, report, Pa. Bul. 293, 308.

- Peppers—
 chile, wilt, N. Mex. Bul. 216, 223.
 diseases, Ga. Bul. 186.
 pimiento, feeds, effect on egg yolk pigmentation, Ga. Bul. 183.
 pimiento, in diet, Ga. Bul. 179.
 pimiento, vitamin A content, Ga. Bul. 177, 179.
 Petroleum oil, penetration in insect eggs, N. H. Tech. Bul. 60.
Phaseolus lunatus—
 fruiting habit, Ohio Bul. 535.
 thresher injuries, Calif. Bul. 580.
Phaseolus vulgaris, development of cotyledonary buds, N. Y. (Cornell) Mem. 167.
 Pheasants—
 artificial propagation, Pa. Bul. 299.
 eggs, temperature and humidity requirements in incubation, N. Y. (Cornell) Bul. 616.
 Phlox, summer-flowering, history, culture, varieties, N. Y. (Cornell) Bul. 588.
Phoma spp., Ky. Bul. 339.
 Phosphate fertilizer experiments, Montana soils, Mont. Bul. 280.
 Phosphates—
 fixation and penetration in soils, Vt. Bul. 356.
 soil, and citrus fertilization, Calif. Bul. 571.
 surface applied, penetration in soils of pastures, Conn. (Storrs) Bul. 186.
 Phosphatic fertilizers, availability, Ark. Bul. 289.
 Phosphorus—
 assimilation, range cattle, N. Mex. Bul. 214.
 availability in fertilizers, Ark. Bul. 289.
 content of tomato, variation in, Ark. Bul. 288.
 content, pasture soils, Vt. Bul. 373.
 deficiency in cattle, Fla. Bul. 264.
 deficiency, in dairy cattle, Kans. Tech. Bul. 36.
 deficiency in rations of cattle, Minn. Tech. Bul. 91.
 distribution and acidity, in orchard soils, Ohio Bul. 517.
 effect on tomato plant, Ark. Bul. 310.
 fertilizers, effect on alfalfa hay, Utah Bul. 247.
 in ration, and slipped tendon in chickens, Iowa Res. Bul. 172.
 in soils, methods of estimating, Colo. Tech. Bul. 2.
 needs, Maryland soils, Md. Bul. 362.
 requirement, dairy cattle, Mich. Tech. Bul. 134.
 requirements, laying hens, Wash. Bul. 306.
 Photoelectric colorimeter, for determination of lead residues on apples, Pa. Bul. 304.
 Photosynthesis—
 apple leaves, N. Y. (Cornell) Bul. 577.
 protein synthesis and translocation, relation of light, potassium, and calcium deficiencies to, Mich. Tech. Bul. 141.
Phytomonas spp., N. Y. (Cornell) Mem. 159.
Phytomonas tumefaciens, N. Y. State Bul. 638.
Phytomonas variabilis, Calif. Bul. 567; Colo. Bul. 399.
 Phytophthora—
 bibliography, Mo. Res. Bul. 184.
 distribution, and host plants, Mo. Res. Bul. 184.
 rot of watermelon, Ariz. Tech. Bul. 51.
 species, identification, W. Va. Bul. 262.
Phytophthora cactorum, Ariz. Tech. Bul. 51.
Phytophthora infestans, biology, N. Y. (Cornell) Mem. 155.
 Pickles, blackening, Mich. Tech. Bul. 140.
 Pigeon pox vaccine, in vaccination of chickens against fowl pox, R. I. Bul. 238.
 Pigs—
 cost of production, Ill. Bul. 390.
 cottonseed meal for, Ohio Bul. 534.
 fattening, green soybeans, alfalfa, and permanent pasture, S. C. Bul. 289.
 fattening, permanent pasture, N. C. Bul. 286.
 feeding, Calif. Bul. 578.
 for production of Wiltshire sides, N. Dak. Bul. 263.
 grain and supplements for fattening, Mont. Bul. 284.
 marketing, Ill. Bul. 408.
 "seedy cut" bacon production, Wis. Res. Bul. 118.
 shrinkage, truck and rail shipment, Ill. Bul. 388.
 See also Pork; Swine.
 Piling, marketing, Ind. Bul. 395.
 Pimiento feeds, effect on egg yolk pigmentation, Ga. Bul. 183.
 Pimiento pepper—
 in diet, Ga. Bul. 179.
 vitamin A content, Ga. Bul. 177, 179.
 Pine—
 longleaf pine region, effect of fires, Fla. Bul. 265.
 Virginia, in Pennsylvania, Pa. Bul. 300.
 white, seedlings, effect of soil temperature, Vt. Bul. 379.
 white, thinning, effect on reproduction, Vt. Bul. 354.
 Pinto beans, chemical composition, N. Mex. Bul. 213.
 Plans affecting agriculture in agricultural recovery, Iowa Bul. 316.
 Plant association and survival, and moisture in semiarid soil, Ariz. Tech. Bul. 53.
 Plant diseases—
 and injuries, Conn. (State) Bul. 358.
 quarantines against, Calif. Bul. 553.
 Plant material, chemical test in determination of potassium needs, Ind. Bul. 384.
 Plant pathogens, green-fluorescent bacterial, comparative study, N. Y. (Cornell) Mem. 159.
 Plant pest handbook, Conn. (State) Bul. 344, 358.
 Plant propagation—
 cuttings, N. Y. (Cornell) Bul. 571.
 notes on, N. Y. State Bul. 649.
 woody cuttings, electric hotbeds for, N. Y. (Cornell) Bul. 618.
 Plant quarantines, efficacy and economic effects, Calif. Bul. 553.
 Plant research, fundamental concepts, Ariz. Bul. 147.
 Plants—
 and plant products, poisonous, N. Dak. Bul. 265.
 cell size and structure, effect of inorganic elements, Vt. Bul. 383.
 effect of radio waves, N. J. Bul. 568.
 manganese in growth of, N. Y. (Cornell) Mem. 151.
 mutations, induced, Mo. Res. Bul. 204.

Plants—Continued.

- poisonous to livestock, N. Dak. Bul. 265; Wyo. Bul. 200.
- poisonous to livestock, arrowgrass, Wyo. Bul. 193.
- poisonous to livestock, deathcamas, Wyo. Bul. 194.
- poisonous to livestock, groundsel, Tex. Bul. 481.
- poisonous to livestock, *Psilostrophe* spp., Tex. Bul. 500.
- rock garden, Mich. Spec. Bul. 228 and supplement.
- variation in nitrogen, phosphorus, and potassium content, Ark. Bul. 288.
- Plectodiscella veneta*, N. J. Bul. 574.
- Plows, shares, alloy treatment, Idaho Bul. 202.
- Plum tree borer, life history and control, S. Dak. Bul. 288.
- Phyria scabiei*, Ohio Bul. 524.
- Poa pratensis*, utilization of nutrients by, N. J. Bul. 570.
- Poi, fermentation and manufacture, Hawaii Bul. 70.
- Poisoning, copper, sheep, Tex. Bul. 499.
- Poisonous plants. *See* Plants, poisonous.
- Pollination—
 - apples, and fruit setting, N. H. Bul. 274.
 - avocados, Fla. Bul. 257.
 - cherry, Utah Bul. 245.
 - fruit, bees for, N. Y. (Cornell) Mem. 147.
- Polyporaceae, of Pennsylvania, Pa. Bul. 298.
- Polyporus, of Pennsylvania, Pa. Bul. 298.
- Population—
 - country, social and economic relationships to villages and cities, N. Y. (Cornell) Bul. 584.
 - mobility, Conn. (Storrs) Bul. 196.
 - movement, New York State, N. Y. (Cornell) Bul. 591.
 - open-country, relationship to villages and cities, N. Y. (Cornell) Bul. 583.
 - prospect in Iowa, Iowa Res. Bul. 177.
 - rural depopulation in Santuc township, S. C. Bul. 287.
 - rural, nonfarming, economic significance, Ind. Bul. 388.
 - rural, trends, Ohio Bul. 533.
 - rural-urban migration, N. C. Bul. 295.
 - sources, changes and composition, Mo. Res. Bul. 188.
 - studies, Va. Bul. 291.
 - trends, Mich. Spec. Bul. 236.
 - urban-rural migration, N. Y. (Cornell) Bul. 595.
- Pork—
 - cost of production, Ala. Bul. 240; Ill. Bul. 390.
 - effect of rice byproduct feeding, Ark. Bul. 303.
 - production, Wiltshire sides, N. Dak. Bul. 263.
 - See also* Bacon; Ham.
- Porter's loam soils. *See* Soils.
- Posts, durability and preservative treatment, Ark. Bul. 287.
- Potash—
 - content, pasture soils, Vt. Bul. 373.
 - effect on cottonseed, Miss. Tech. Bul. 20.
 - hunger or rust in cotton, Ark. Bul. 308.
 - on Maryland soils, Md. Bul. 362.
- Potassium—
 - content of tomato, variation in, Ark. Bul. 288.
 - deficiency, effect on composition of tomato plant, N. H. Tech. Bul. 59.

Potassium—Continued.

- deficiency, relation to photosynthesis, protein synthesis, and translocation, Mich. Tech. Bul. 141.
- effect on keeping quality of fruit, Md. Bul. 366.
- effect on tomato plant, Ark. Bul. 310.
- in soils, properties of replaceable, Ariz. Tech. Bul. 50.
- in soils, solubility and availability, Ariz. Tech. Bul. 50.
- needs of plants, chemical test in determination, Ind. Bul. 384.
- Potato farms, organization and management, Va. Bul. 289.
- Potato flea beetle, control, Colo. Bul. 400; Wash. Bul. 280.
- Potato plant, development, effect of nitrogen and different temperatures and photoperiods, Nebr. Res. Bul. 75.
- Potato scab, factors affecting occurrence, N. Y. (Cornell) Bul. 581.
- Potato scab-gnat, control, Ohio Bul. 524.
- Potatoes—
 - consumer preferences, Wis. Res. Bul. 124.
 - cost of production and returns, N. Y. (Cornell) Bul. 568.
 - cultural tests, Mich. Spec. Bul. 245.
 - culture, Colo. Bul. 412; Conn. (Storrs) Bul. 183.
 - experiments, Bluewater irrigation district, N. Mex. Bul. 218.
 - fertilizer experiments, N. C. Bul. 283.
 - freeze injury, effect on size of seed piece, La. Bul. 254.
 - growing with tractor power, Pa. Bul. 306.
 - handling methods, effect on quality, Maine Bul. 365.
 - investigations, La. Bul. 239.
 - isolated tuber-unit seed plats for control of virus diseases and blackleg, Maine Bul. 370.
 - Jersey redskin, Tenn. Bul. 148.
 - lime-sulphur in control of tomato psyllid, Colo. Bul. 411.
 - plants from basal and apical sets, N. Y. State Bul. 633.
 - psyllid yellows, control, Colo. Bul. 410.
 - seed, certified, economics of production, Vt. Bul. 370.
 - seed, irrigated and nonirrigated compared, Mont. Bul. 279.
 - seed maintenance, Md. Bul. 361.
 - seed piece, effect of size on freeze injury, La. Bul. 254.
 - seed, storage temperatures for, N. Y. (Cornell) Mem. 168.
 - seed, treatment tests, Mich. Spec. Bul. 246.
 - spraying, Md. Bul. 361.
 - spraying and dusting, Mich. Spec. Bul. 234.
 - storage, N. Y. (Cornell) Bul. 553.
 - transmission of aster yellows by *Cicadula divisa*, Calif. Hilgardia, vol. 8, no. 10.
 - tubers, insects and injuries, N. Y. (Cornell) Bul. 569.
 - tubers, propagative value, effect of storage temperature, N. Y. (Cornell) Mem. 168.
- Poultry—
 - blood studies, N. C. Tech. Bul. 44.
 - breeding and length of biological laying year, Mass. Bul. 298.

Poultry—Continued.

- breeding for egg production, Mass. Bul. 307.
- breeding. *See also* Poultry, inbreeding.
- cane molasses for, Hawaii Bul. 67.
- creeper fowl, skeletal growth, Conn. (Storrs) Bul. 193.
- diseases, control, Nebr. Bul. 290.
- effect of confinement brooding on growth and egg production, Ky. Bul. 346.
- effect of feeding arsenic poisoned grasshoppers, Okla. Bul. 218
- embryonic lethal characters, La. Bul. 255.
- feed consumption in egg-laying contests, Md. Bul. 359.
- feeding, Ariz. Bul. 143.
- feeding, housing, and lighting, Wyo. Bul. 203.
- grazing crops, N. C. Bul. 282.
- hatchability, factors affecting, Mo. Bul. 341.
- houses, ventilation, N. Y. (Cornell) Bul. 558.
- housing experiments, Ariz. Bul. 143; Wyo. Bul. 203.
- inbreeding, Mass. Bul. 312.
- leucosis and lymphomatosis, Va. Tech. Bul. 56.
- marketing, Utah Bul. 244.
- metabolism of calcareous materials, S. Dak. Bul. 287.
- molting and housing experiments, Ariz. Bul. 143.
- neurolymphomatosis, Mass. Bul. 308.
- nutritive value of sorghum, corn, and wheat, Kans. Bul. 268.
- production and marketing, Utah Bul. 244.
- Rhode Island Reds, characteristics of non-broody and broody lines, Mass. Bul. 301.
- Rhode Island Reds, inbreeding, effects on fecundity, Mass. Bul. 312.
- rice byproducts for, Ark. Bul. 304.
- See also* Capons; Chickens; Chicks; Hens; Pullets.
- Powdery mildew, cereals, N. Y. (Cornell) Mem. 157.
- Power—
 - Diesel, operating costs, Mont. Bul. 289.
 - farm, horse and tractor, costs, Ill. Bul. 395.
 - farm, in crop production, Ind. Bul. 378.
 - labor and machine costs in crop production, Mo. Res. Bul. 197.
 - See also* Tractors.
- Pregnancy disease of sheep, Ky. Bul. 354.
- Pressley sorter, improving uniformity of cotton fiber by use of, Ariz. Tech. Bul. 54.
- Price movements and Pennsylvania agriculture, Pa. Bul. 309.
- Price-quality relationships, farmers' cotton markets, Tex. Bul. 501.
- Prices—
 - agricultural products, Ind. Bul. 387; Maine Bul. 364; Minn. Bul. 303; Nebr. Bul. 284; Wis. Res. Bul. 119.
 - agricultural products, reliability and adequacy of data, S. Dak. Bul. 286.
 - and costs, farm, Mich. Tech. Bul. 139.
 - and supply, eggs, N. Y. (Cornell) Bul. 596.
 - corn, fluctuations, Iowa Res. Bul. 164.
 - cotton, Miss. Tech. Bul. 21; N. C. Bul. 289; S. C. Bul. 290.
 - cotton in the seed, Okla. Bul. 219.

Prices—Continued.

- cotton, related to grade and staple, Ga. Bul. 174; N. C. Bul. 289; S. C. Bul. 290.
- cotton, relation to quality, Tenn. Bul. 153.
- egg-feed ratio, Wash. Bul. 297.
- eggs, Mo. Bul. 337.
- eggs, and supply, N. Y. (Cornell) Bul. 596.
- eggs, relation to quality, N. Y. (Cornell) Bul. 597.
- farm, Wis. Res. Bul. 119.
- farm crops, Minn. Bul. 303.
- farm, index numbers, Calif. Bul. 569; Idaho Bul. 210.
- farm land, Nebr. Res. Bul. 72.
- farm products. *See* Prices, agricultural products.
- flaxseed, N. Dak. Bul. 263.
- livestock, Mich. Tech. Bul. 139.
- milk and cream, as related to pay rolls, Ill. Bul. 397.
- milk, secondary markets, Mass. Bul. 304.
- swine, variations in, Iowa Res. Bul. 161.
- vegetables, New York market, N. J. Bul. 575.
- Prionoxystus robiniae*, N. Dak. Bul. 278.
- Proration, in agricultural marketing, Calif. Bul. 565.
- Prostogonimus macrorchis*, taxonomy, morphology, and biology, Minn. Tech. Bul. 98.
- Protein—
 - concentrate mixtures, and milk production, N. Y. (Cornell) Bul. 578.
 - synthesis, relation of light, potassium, and calcium deficiencies to, Mich. Tech. Bul. 141.
 - variation of amount in ration, effect on rats, Mo. Res. Bul. 195.
- Prunes, irrigation experiments, Calif. Bul. 573.
- Pruning—
 - apricots, Calif. Bul. 574.
 - dewberries, coniothyrium cane blight control, N. C. Bul. 291.
 - grapes, effect on growth and production, Ill. Bul. 393.
 - olive trees, Calif. Bul. 568.
 - raspberries, Minn. Tech. Bul. 100.
- Pseudomonas juglandis*, Calif. Bul. 564.
- Pseudomonas* spp., N. Y. (Cornell) Mem. 159.
- Pseudoperonospora cubensis*, Ga. Bul. 175.
- Psilostrophe tagetinae* and *Psilostrophe gnaphalodes*, poisonous to sheep and cattle, Tex. Bul. 500.
- Psoroptes ovis*, Tex. Bul. 479.
- Psyllid, tomato. *See* Tomato psyllid.
- Psyllid yellows of potato, control, Colo. Bul. 410.
- Pullets—
 - cod-liver oil for, Ky. Bul. 337.
 - cost of production, Ariz. Bul. 145.
 - egg production, effect of feed supplements, Ark. Bul. 293.
 - length of biological laying year, Mass. Bul. 298.
 - Rhode Island Reds, time interval from first egg to standard egg weight, Mass. Bul. 313.
- Pullorum disease, in poultry, Oreg. Bul. 313.
- Pump irrigation, Nebr. Bul. 282.
- Purchasers of farms, suggestions to, Minn. Bul. 309.
- Purchasing—
 - and marketing, activities, farm bureau, Calif. Bul. 563.
 - for the household, N. Y. (Cornell) Bul. 561.
 - power, farm products, Nebr. Bul. 284.

- Putting greens, grasses, R. I. Bul. 245.
Pyrausta nubilalis, Pa. Bul. 284.
- Pyrethrum—
 as contact insecticide, N. H. Tech. Bul. 54.
 pyrethrin content, Colo. Bul. 401.
- Pythium debaryanum*, Conn. (State) Bul. 359.
Pythium ultimum, N. Y. State Bul. 643.
- Quails, eggs, temperature and humidity requirements in incubation, N. Y. (Cornell) Bul. 616.
- Quarantines. *See* Plant quarantines.
- Rabbits—
 and guinea pigs, nutritional requirements, Mo. Res. Bul. 219.
 jack, life history and ecology, relation to grazing, Ariz. Tech. Bul. 49.
- Radiation, artificial, for forcing greenhouse crops, Ind. Bul. 330.
- Radio waves, effect on insects and plants, N. J. Bul. 568.
- Raisin industry, foreign production, trade, and government aid, Calif. Bul. 566.
- Rammed earth walls, farm buildings, S. Dak. Bul. 277.
- Rams, scrotum, thermo-regulatory function, Mo. Res. Bul. 217.
- Ranches—
 mountain valley, cattle production, Wyo. Bul. 197.
 types, Mont. Bul. 287.
- Randolph area, dairy farming, Vt. Bul. 376.
- Range cattle. *See* Cattle, range.
- Ranges, rabbits in relation to grazing, Ariz. Tech. Bul. 49.
- Raspberries—
 and strawberries, production trends, Minn. Bul. 305.
 black, fruiting habit, Colo. Tech. Bul. 8.
 culture and disease control, N. Y. State Bul. 625.
 disease control, N. Y. State Bul. 625.
 Latham, pruning, response to, Minn. Tech. Bul. 100.
- Rats—
 albino, feeding spray chemicals, Mo. Res. Bul. 183.
 effects of variation of amounts of vitamin B and protein in the ration, Mo. Res. Bul. 195.
 food requirement for growth, Minn. Tech. Bul. 92.
 incisor, changes in enamel and dentin in fluorosis, Ariz. Tech. Bul. 52.
 incisor, experimental production of mottled enamel, Ariz. Tech. Bul. 45.
 inheritance as factor in food utilization, Minn. Tech. Bul. 92.
 nutrition tests with alcohol byproduct, Md. Bul. 349.
 white, metabolism studies, Mo. Res. Bul. 189, 190.
 white, nerve degeneration and avitaminosis A, Ohio Bul. 545.
- Real estate—
 farm, situation, Mo. Res. Bul. 203.
 farm, tax delinquency, S. C. Bul. 298.
 farm, taxes, Ky. Bul. 352.
 farm, values, Minn. Bul. 307.
 valuation, Ill. Bul. 399.
- Recreational uses of land, Conn. (Storrs) Bul. 194; Mass. Bul. 294; Mich. Spec. Bul. 247.
- Red clover. *See* Clover, red.
- Red copper oxide, dusting seed for damping-off, N. Y. State Bul. 643.
- Red scale—
 and yellow scale, comparison, Calif. Hilgardia, vol. 7, no. 11.
 on lemons, spray fumigation, Calif. Bul. 583.
- Redtop—
 in farm organization, Ill. Bul. 404.
 production and marketing, Ill. Bul. 404.
- Refrigeration—
 cream, Ind. Bul. 374.
 dairy, on rural electric lines, Ala. Bul. 241.
 home methods, R. I. Bul. 239.
 milk, Oreg. Bul. 331.
 packages of apples, Ill. Bul. 410.
- Relief, rural. *See* Rural relief.
- Respiration calorimeter, construction and operation, Pa. Bul. 302.
- Respiration in stored oats, Iowa Res. Bul. 165.
- Rhagoletis completa*, Calif. Hilgardia, vol. 8, no. 11.
- Rhagoletis pomonella*, N. Y. State Bul. 644; Tech. Bul. 206, 215.
- Rhinitis, infectious, of fowls, hemophilic bacillus as cause, R. I. Bul. 244.
- Rhizobium japonicum*, longevity in relation to its symbiont on the soil, N. Y. (Cornell) Mem. 162.
- Rhizobium* spp., production of gum, Iowa Res. Bul. 158.
- Rhizoctonia solani*, N. Y. (Cornell) Mem. 158.
- Rhode Island Reds. *See* Poultry.
- Rice—
 and rice byproducts, for laying hens, La. Bul. 243.
 area, rural social organization, Ark. Bul. 296.
 byproducts, for feeds, La. Bul. 242.
 byproducts for poultry, Ark. Bul. 304.
 byproducts, swine feeding, Ark. Bul. 303.
 farms, organization and management, La. Bul. 233.
 fertilizers, Ark. Bul. 291.
 mills, saw-toothed grain beetle as pest in, Ark. Bul. 309.
 nutrition, laboratory and greenhouse studies, Ark. Bul. 301.
 stem rot, development and control, Ark. Bul. 295.
 varieties, Tex. Bul. 485.
 water weevil, Ark. Bul. 299.
- Richmond area, dairy farming, Vt. Bul. 376.
- Rickets—
 in calves, Pa. Bul. 291.
 in calves, treatment, Wis. Res. Bul. 115.
- Ring spot disease, sugarcane, Fla. Bul. 267.
- Ringing, apple trees, Pa. Bul. 290.
- Rio Grande—
 Lower Rio Grande Valley, carlot distribution of vegetables, Tex. Bul. 497.
 Middle Rio Grande conservancy district, farm organization, N. Mex. Bul. 215.
- Roadside markets, Md. Bul. 365; Ohio Bul. 521.
- Rock garden plants, Mich. Spec. Bul. 228 and supplement.
- Rock gardens, Mich. Spec. Bul. 228.
- Rodenticides, composition, Conn. (State) Bul. 346.

- Rogue River Valley, dormant sprays for fruit tree insects, Oreg. Bul. 321.
- Roofings, roll, durability tests, Iowa Bul. 304.
- Root-knot nematode—
effect of temperature, Calif. Hilgardia, vol. 7, no. 10.
reproduction without males, Calif. Hilgardia, vol. 7, no. 10.
- Root rots of peas, N. Y. State Bul. 621; Wis. Bul. 424.
- Rootstocks, fruit trees, N. Y. State Bul. 649.
- Root weevils, strawberries, Oreg. Bul. 339.
- Roses—
and carnations, use of old soil in growing, Ill. Bul. 400.
brand canker, N. Y. (Cornell) Mem. 153.
summer-budded, effect of storage on forcing, Ill. Bul. 409.
- Rosette disease, blackberries and dewberries, La. Bul. 250.
- Rosy aphid, tar distillate emulsions, in control, N. Y. State Bul. 636.
- Rotation of crops. *See* Crops, rotation.
- Roughage, production, economic study, N. H. Bul. 273.
- Roundworms in swine, eradication by chenopodium, S. Dak. Bul. 283.
- Rubus occidentalis*, fruiting habit, Colo. Tech. Bul. 8.
- Ruminants—
digestibility of brown alfalfa hay, sesame meal, and artichoke silage, Calif. Bul. 575.
metabolism, Mo. Res. Bul. 180.
- Rural churches. *See* Churches.
- Rural community development, Waterville, N. Y. (Cornell) Bul. 608.
- Rural community trends, Mo. Res. Bul. 199.
- Rural depopulation, in Santuc township, S. C. Bul. 287.
- Rural economic organization, land utilization as basis, Vt. Bul. 357.
- Rural groups, country neighborhoods, Wis. Res. Bul. 120.
- Rural organization contacts, Ky. Bul. 350.
- Rural organizations—
local group, Ill. Bul. 392.
negro, Va. Bul. 290.
social, rice district, Ark. Bul. 296.
social, south-central Arkansas, Ark. Bul. 313.
social, Washington County, Ark. Bul. 285.
- Rural population. *See* Population.
- Rural relief in South Dakota, S. Dak. Bul. 239.
- Rural schools. *See* Schools, rural.
- Rural social agencies, trends, Ohio Bul. 529.
- Rural social organizations. *See* Rural organizations, social.
- Rural young folk, N. Y. (Cornell) Bul. 617.
- Rust of snapdragon, inheritance of resistance to, Calif. Hilgardia, vol. 8, no. 7.
- Rutabagas—
for cows, W. Va. Bul. 256.
vitamin content and palatability, effect of storage, Mont. Bul. 277.
- Rye—
mulched and turned, effects on liberation of plant nutrients, Va. Tech. Bul. 53.
resistance to low temperature, Kans. Tech. Bul. 35.
strawworm and rye jointworm, Utah Bul. 243.
- St. Albans area, dairy farming, Vt. Bul. 376.
- St. Lawrence County soils, field crops and pastures, N. Y. (Cornell) Bul. 570.
- Saline water, effect on animals, Okla. Bul. 217.
- Salt River Valley, costs and returns from field crops, Ariz. Bul. 146.
- San Diego County, classification and evaluation of soils, Calif. Bul. 552.
- Santuc Township, rural depopulation, S. C. Bul. 287.
- Sauerkraut, effect of inoculation on composition and bacterial flora, N. Y. State Tech. Bul. 216.
- Saw-toothed grain beetle, as rice-mill pest, Ark. Bul. 309.
- Scabies, sheep, control, Tex. Bul. 479.
- Scale insects. *See* Red scale; Yellow scale.
- School children. *See* Children, school.
- School lunches, mid-morning, effect on children, Mass. Bul. 310.
- Schools—
financing, Del. Bul. 182.
rural, organization, Mich. Spec. Bul. 229.
- Scion, effect on root development of apple trees, N. Y. State Tech. Bul. 218.
- Sclerotinia fruticola*, cytological study, Md. Bul. 371.
- Sclerotinia trifoliorum*, resistance of red clover to, Ky. Bul. 341.
- Sclerotium oryzae*, Ark. Bul. 295.
- Serotum, thermo-regulatory function and mechanism, Mo. Res. Bul. 217.
- Seed—
alfalfa, screenings, for cows, Idaho Bul. 206.
corn, germination, physiologic factors affecting, Iowa Res. Bul. 176.
corn, molds, during germination, S. Dak. Bul. 275.
damping-off, dusting with red copper oxide, N. Y. State Bul. 643.
inspection, N. J. Bul. 550, 562; Vt. Bul. 365, 384.
laws and regulations, Md. Bul. 343.
lettuce, germination, N. Y. State Tech. Bul. 222.
potato enterprise, Vt. Bul. 370.
potatoes. *See* Potatoes.
redtop, production and marketing, Ill. Bul. 404.
small grain, dormancy in, Colo. Tech. Bul. 5.
sugar beet, N. Mex. Bul. 207.
testing, N. H. Bul. 276, 232.
Tilia, dormancy, N. Y. (Cornell) Mem. 169.
vegetable, quality, N. Y. State Bul. 618, 642.
weight, Md. Bul. 362.
- Seeding burned-over land, Idaho Bul. 201.
- Seedlings, formaldehyde dust in control of disease, Ohio Bul. 520.
- Senecio* spp., poisonous to cattle, Tex. Bul. 481.
- Service relations, town-country, trends in, Wis. Res. Bul. 117.
- Services, social and economic, N. Y. (Cornell) Bul. 614.
- Sesame meal for ruminants, Calif. Bul. 575.
- Sheep—
copper poisoning, Tex. Bul. 499.
effect of ration on wool, Okla. Bul. 220.
foot rot, Mont. Bul. 285.
grub in the head, Nev. Bul. 135.

Sheep—Continued.

- Hampshire-Rambouillet, wool inheritance, Wyo. Bul. 196.
- investigations and management Mich. Spec. Bul. 255.
- lungworm in, Oreg. Bul. 327.
- metabolism, Mo. Res. Bul. 180.
- multipipple trait, inheritance, N. H. Tech. Bul. 53.
- Ostertagia circumcincta* in, Va. Tech. Bul. 52.
- poisoning by arrowgrass, Wyo. Bul. 193.
- poisoning by *Psisostrophe* spp., Tex. Bul. 500.
- pregnancy disease, Ky. Bul. 354.
- scab mite, control, Tex. Bul. 479.
- See also* Ewes; Lambs; Rams.

Shipping associations. *See* Marketing associations.
Shrubs—

- for western Kansas, Kans. Bul. 270.
- leaf feeding and gall making insects on, Mich. Spec. Bul. 243.
- wood borers, Mich. Spec. Bul. 238.

Silage—

- artichoke, for ruminants, Calif. Bul. 575.
- corn, effect of nitrogenous fertilizers on protein content, N. J. Bul. 563.
- corn, feeding investigations, Conn. (Storrs) Bul. 198.
- corn, for fattening lambs, N. Mex. Bul. 222.
- corn, in steer feeding, N. Mex. Bul. 211.
- corn, nutrients, composition, feeding value, Ill. Bul. 391.
- corn, types and varieties for, Ill. Bul. 391.
- production, management, and costs, N. H. Bul. 273.
- sorghum, for fattening steers, Miss. Bul. 301.

Silos, walls, thermal conductivity and surface treatment, Iowa Bul. 303.

Sinuate pear borer, feeding habits, N. Y. State Bul. 648.

Sires—

- dairy, cost of keeping, selection, and management, Oreg. Bul. 312.
- progeny performance, N. J. Bul. 572.
- proved, in dairy cattle breeding, N. Y. State Bul. 645.

Sitotroga cerealella, Conn. (State) Bul. 353.

Skim milk—

- dry, cottage cheese from, Mo. Res. Bul. 187.
- dry, effect on cream cheese, Mo. Res. Bul. 213.
- dry, effect on whipped cream, Mo. Res. Bul. 214.
- dry, for cultured buttermilk, Ala. Bul. 239.
- dry, recipes, Minn. Bul. 313.
- powder for calves, Md. Bul. 354.
- vitamin A content, Nebr. Res. Bul. 69.

Smuts, barley and wheat, N. Y. State Tech. Bul. 221.

Snapdragon, inheritance of resistance to rust, Calif. Hilgardia, vol. 8, no. 7.

Social activities. Unionville District, Chester County, Pa. Bul. 286.

Social agencies, trends, Ohio Bul. 529.

Social and economic areas—

- Broome County, N. Y. (Cornell) Bul. 559.
- central New York, N. Y. (Cornell) Bul. 614.
- Onondaga County, N. Y. (Cornell) Bul. 584.

Social areas, rural, relation of villages and cities to changes in, N. Y. (Cornell) Bul. 582.

Social conditions and trends, Virginia counties, Va. Bul. 291.

Social organization. *See* Rural organization, social.
Sodium chlorate, in control of bindweed, Nebr. Bul. 287.

Sodium fluoride, in production of mottled enamel, Ariz. Tech. Bul. 45, 52.

Sodium hypochlorite, as preventative of blue mold in apples, Wash. Bul. 304.

Sodium nitrate—

- effect on yield of cotton, Tex. Bul. 490.
- for field crops, Mo. Bul. 327.

Soil acidity—

- and apple trees, N. Y. State Bul. 646.
- and phosphorus distribution, Ohio Bul. 517.

Soil deficiency, Winogradsky spontaneous culture method for determining, Iowa Res. Bul. 157.

Soil erosion—

- and land use, N. J. Bul. 552.
- control structures, Wis. Res. Bul. 122.
- physico-chemical properties of soils affecting, Mo. Res. Bul. 212.

Soil experiment fields, crop yields, Ill. Bul. 398, 402.

Soil fertility—

- experiments, orchards, Pa. Bul. 294.
- losses, Mo. Bul. 324.
- studies, Ark. Bul. 290.
- tests, S. Dak. Bul. 280.

Soil nitrate levels for table beets, effect on nitrogen fractions in juice from leaves, R. I. Bul. 242.

Soil nitrogen. *See* Nitrogen, soil.Soil reconnaissance. *See* Soil survey.

Soil solution, orchards, effect of cover crops, Calif. Hilgardia, vol. 7, no. 14.

Soil survey—

Illinois—

- Ford County, Ill. Soil Rpt. 54.
- Jackson County, Ill. Soil Rpt. 55.
- Schuyler County, Ill. Soil Rpt. 56.

Iowa—

- Butler County, Iowa Soil Rpt. 70.
- Calhoun County, Iowa Soil Rpt. 72.
- Pocahontas County, Iowa Soil Rpt. 69.
- Sac County, Iowa Soil Rpt. 71.

Montana—

- Glacier County, Mont. Bul. 274.
- Pondera County, Mont. Bul. 291.
- Toole and Liberty Counties, Mont. Bul. 273.

Soil temperature, effect on white pine seedlings, Vt. Bul. 379.

Soils—

- agricultural, classification, N. C. Bul. 293.
- agricultural value, N. Y. (Cornell) Bul. 619.
- agricultural value, index for rating, Calif. Bul. 556.
- alkali, reclamation, Calif. Hilgardia, vol. 8, no. 5.
- alkaline calcareous, available phosphorus estimation, Colo. Tech. Bul. 2.
- and crops, effect of ammonium compounds, N. J. Bul. 571.
- and crops, effect of limestone, Ill. Bul. 405.
- and field crop and pasture management, N. Y. (Cornell) Bul. 567, 570, 600, 612.

Soils—Continued.

- and fruit growing, N. Y. (Cornell) Bul. 575, 592, 609.
 bacteria, *Rhizobium japonicum*, longevity, N. Y. (Cornell) Mem. 162.
 Berks shale, lime and fertilizers for field crops, Va. Bul. 292.
 calcareous, potassium in, Ariz. Tech. Bul. 50.
 classification, Mich. Spec. Bul. 231.
 classification and agricultural value, N. Y. (Cornell) Bul. 619.
 classification and evaluation, Calif. Bul. 552; N. C. Bul. 293.
 claypan development in, Mo. Res. Bul. 210.
 colloidal fraction of subsoils, Del. Bul. 186.
 conservation of liming materials, Tenn. Bul. 152; Va. Tech. Bul. 54.
 distribution and character, Md. Bul. 362.
 effect of rye on liberation of plant nutrients, Va. Tech. Bul. 53.
 forest, and forest litter, N. Y. (Cornell) Mem. 166.
 forest, effect of fires on, Fla. Bul. 265.
 forest, relation to growth, Mich. Tech. Bul. 135.
 Grande Ronde Valley, fertility, Ore. Bul. 311.
 greenhouse, use of old soil in rose and carnation growing, Ill. Bul. 400.
 Grundy silt loam, alfalfa on, Iowa Bul. 305.
 Grundy silt loam, soybeans on, Iowa Bul. 298.
 Henderson, Hidalgo, Milam, Nacogdoches, Navarro, Wichita, Willacy, and Victoria Counties, Tex. Bul. 482.
 impermeable, effects of acidifying amendments, N. Mex. Bul. 210.
 lime on, Vt. Bul. 371.
 liming, Md. Bul. 362; Oreg. Bul. 325.
 management for vegetables, Nebr. Bul. 278.
 manganese availability and normal crops, R. I. Bul. 246.
 manganese fertilizers, Md. Bul. 362.
 mineral deficiencies, Winogradsky spontaneous culture method for determining, Iowa Res. Bul. 157.
 muck, acid and alkaline, correcting unproductiveness, N. Y. (Cornell) Bul. 572.
 muck, crop responses to lime and fertilizers, N. C. Bul. 292.
 muck, lettuce production, N. Y. (Cornell) Bul. 564.
 muck, vegetable production, Ind. Bul. 392.
 nitric nitrogen in, Colo. Tech. Bul. 6.
 orchard. *See* Orchards, soils.
 organic matter accumulations, Okla. Bul. 216.
 oxidation-reduction potential in evaluating, for orchard purposes, N. Y. (Cornell) Bul. 592.
 pasture, fertilizer tests, Mass. Bul. 306.
 pasture, penetration of lime and phosphates, Conn. (Storrs) Bul. 186.
 pasture, potash and phosphorus content, Vt. Bul. 373.
 peat, Azotobacter in, N. Y. (Cornell) Mem. 148.
 peat, buffer capacity, N. Y. (Cornell) Mem. 146.
 peat, deposits, character of, N. Y. (Cornell) Mem. 149.
 peat, potential changes induced by limingsuspensions, N. C. Tech. Bul. 47.

Soils—Continued.

- phosphate, and citrus fertilization, Calif. Bul. 571.
 phosphate fertilizer experiments, Mont. Bul. 280.
 phosphates, fixation and penetration, Vt. Bul. 356.
 phosphorus needs, Md. Bul. 362.
 physical properties, and tile drain spacing and depth, Minn. Tech. Bul. 101.
 physico-chemical properties affecting erosion, Mo. Res. Bul. 212.
 Porter's loam, limestone on, N. C. Bul. 285.
 potash fertilizers, Md. Bul. 362.
 productivity classification, Md. Bul. 351.
 reclamation, Calif. Hilgardia, vol. 8, no. 5.
 rice, available nitrogen, effect on yield, Ark. Bul. 302.
 San Diego County, classification and evaluation, Calif. Bul. 552.
 sandy, management, Mich. Spec. Bul. 248.
 semiarid, plant association and survival, and build-up of moisture, Ariz. Tech. Bul. 53.
 studies in land utilization, N. Y. (Cornell) Mem. 160.
 subsoil, colloidal fractions, Del. Bul. 186.
 subsoil variations, Okla. Bul. 214.
 testing, Mich. Tech. Bul. 132.
 Toxaway loam, limestone on, N. C. Bul. 285.
 utilization for agriculture, N. J. Bul. 569.
 vineyard, Westfield area, Chautauqua County, N. Y. (Cornell) Bul. 609.
 Sooty blotch disease of apple, Va. Tech. Bul. 50.
 Sorghum—
 culture, Kans. Bul. 265.
 for forage, Tex. Bul. 496.
 for grain and forage, Okla. Bul. 210; S. Dak. Bul. 285.
 grain, nutritive value as poultry feed, Kans. Bul. 268.
 production, Kans. Bul. 265.
 varieties, Kans. Bul. 266.
 worm, control, Mo. Bul. 320.
 Sorgo, for lambs, Kans. Bul. 264.
 Southern cornstalk borer, S. C. Bul. 294.
 Soybean hay, machine dried, for cattle, La. Bul. 257.
 Soybeans—
 and *Rhizobium japonicum* in soil, N. Y. (Cornell) Mem. 162.
 Cayuga, production and use, N. Y. (Cornell) Bul. 601.
 experiments, Mass. Bul. 309.
 ground, for chicks, Del. Bul. 183.
 inoculation and liming, on Grundy silt loam, Iowa Bul. 298.
 production, Iowa Bul. 309.
 production, labor and power in, La. Bul. 253.
 with corn and fishmeal for hogs, S. C. Bul. 289.
 Spark arresters, for motorized equipment, Calif. Bul. 577.
 Sparrows, of New Jersey, N. J. Bul. 580.
 Specific dynamic action problems, Mo. Res. Bul. 193.
 Spillways, hydraulic characteristics, Wis. Res. Bul. 122.
 Spinach, damping-off, copper seed treatment, N. Y. (Cornell) Bul. 566.

- Spray chemicals, feeding white rats, Mo. Res. Bul. 183.
- Spray-fumigation, red scale on lemons, Calif. Bul. 583.
- Spray residue—
on apples, determination, Pa. Bul. 304.
relation to spray schedules, Ind. Bul. 381.
- Spray residue removal—
apples, Md. Bul. 368; N. Y. (Cornell) Bul. 604; Wash. Bul. 286.
apples and pears, Oreg. Bul. 317.
fruit washer, Wash. Bul. 285.
- Spraying—
and dusting, apples, Maine Bul. 368.
and dusting, apples, costs and returns, Pa. Bul. 311.
and dusting, potatoes, Mich. Spec. Bul. 234.
apples for codling moth, N. Y. State Bul. 627.
apples for codling moth and scab, Mich. Spec. Bul. 230.
cantaloupes, for downy mildew, Ga. Bul. 175.
potatoes, Md. Bul. 361.
vs. dusting, apple orchards, Ohio Bul. 527.
- Sprays—
dormant, fruit trees, Oreg. Bul. 321
oil. *See* Oil sprays.
- Spruce gall aphid, control, N. Y. State Tech. Bul. 225.
- Spurge, leafy, N. Dak. Bul. 266.
- Standard of living—
farm families, Wis. Res. Bul. 114, 121.
negroes, Va. Bul. 295.
Plain City, Utah Bul. 249.
See also Families, farm, expenditures.
- Statistical methods—
for calculating significance of plat yields of strawberries, N. H. Tech. Bul. 55.
of analysis of feed-lot gains of lambs, Colo. Tech. Bul. 10.
- Statistical procedure in analysis of swine-price data, Iowa Res. Bul. 161.
- Statistics, agricultural. *See* Agriculture, statistics.
- Steers—
cottonseed hulls and sorghum silage for finishing, Miss. Bul. 301.
efficiency, variations in, Minn. Tech. Bul. 94.
fattening, corn, cottonseed meal and molasses, N. Mex. Bul. 211.
muscle fibers, effect of feeding on, Mo. Res. Bul. 200.
winter feeding, Ind. Bul. 371.
- Stem rot—
of clover, Ky. Bul. 341.
of rice, Ark. Bul. 295.
- Stiff-lamb disease, N. Y. (Cornell) Bul. 603.
- Stiffs in cattle, Fla. Bul. 264.
- Stomach worms, lambs, N. C. Bul. 287.
- Stone-fruit trees, bacterial canker, Calif. Hilgardia, vol. 8, no. 3.
- Stone fruits, insect, Mich. Spec. Bul. 244.
- Storage—
air-cooled, value of ice in, Ind. Bul. 379.
carrots, physiological and chemical changes, N. Y. (Cornell) Mem. 161.
cold, vegetables, N. Y. (Cornell) Bul. 602.
flour, effect on quality, Wyo. Bul. 193.
gladiolus, temperature, Iowa Res. Bul. 170.
onions, Ind. Bul. 393.
- Storage—Continued.
potatoes, N. Y. (Cornell) Bul. 553.
potatoes, effect of temperature on propagation value, N. Y. (Cornell) Mem. 168.
r oses, effect on forcing qualities, Ill. Bul. 409.
- Stored beans and cowpeas, weevils in, Tenn. Bul. 150.
- Stored carrots, vitamin content, Mont. Bul. 276.
- Stored rutabagas, vitamin content, Mont. Bul. 277.
- Stoves—
electric range, utensils for, Wash. Bul. 283.
electric, study of, Nebr. Res. Bul. 68.
- Strawberries—
crinkle disease, Oreg. Bul. 319.
fertilizer experiments, N. H. Tech. Bul. 55.
production trends, Minn. Bul. 305.
root weevils, Oreg. Bul. 330.
- Strawberry leaf blights, control, La. Bul. 252.
- Strawberry leaf louse, as vector of crinkle disease, Oreg. Bul. 319.
- Streptococci—
of animals, relation to streptococci of man, Ky. Bul. 338.
of infectious bovine mastitis, Conn. (Storrs) Bul. 195.
- Stripe resistance, barley, Wis. Res. Bul. 116.
- Subsoil variations, moisture and fertility relations, Okla. Bul. 214.
- Subsoils, colloidal fraction, and electrodiализable bases and buffering, Del. Bul. 186.
- Sucrose content of sugar maple trees, Vt. Bul. 353.
- Sudan grass—
as emergency pasture, Mich. Spec. Bul. 240.
for pasture, Del. Bul. 189.
- Suffolk and Nassau Counties, soil, field crop, and pasture management, N. Y. (Cornell) Bul. 600.
- Suffolk and Nassau Counties, vegetable production, N. Y. (Cornell) Bul. 611.
- Sugar beet seed, production, N. Mex. Bul. 207.
- Sugar beets—
Cercospora leaf-spot, pathogenicity and control, Iowa Res. Bul. 168.
curly top. *See* Curly top.
experimental inoculation with curly-top virus, Calif. Hilgardia, vol. 8, no. 1.
- Sugar, maple, and cream, Vt. Bul. 394.
- Sugar maple tree, carbohydrate contents, Vt. Bul. 358.
- Sugarcane—
borer, effect on value of seed cane, La. Bul. 240.
cyanamid as source of nitrogen for, La. Bul. 237.
effect of borer on seed stock, La. Bul. 240.
molasses for poultry, Hawaii Bul. 67.
moth borer, control by *Trichogramma minutum*, La. Bul. 235, 248.
ring spot disease, Fla. Bul. 267.
stubble deterioration, La. Bul. 256.
variety P. O. J. 2878, P. R. Bul. 35.
variety tests, La. Bul. 247.
- Sulphate of ammonia, in tobacco fertilizers, Conn. (State) Bul. 359.
- Sulphur, neutral, as function of body weight, Mo. Res. Bul. 220.
- Sulphuric acid, in sprays for weed control, Calif. Hilgardia, vol. 8, no. 4.
- Sulphurous acid, in fig preservation, Tex. Bul. 483.
- Sumter County, agriculture, S. C. Bul. 288.
- Sunflower silage, for dairy cattle, Mont. Bul. 282.

- Sweeny in cattle, Fla. Bul. 264.
 Sweet corn. *See* Corn, sweet.
 Sweetclover—
 at Archer field station, Wyo. Bul. 195.
 blackstem, Ky. Bul. 339.
 culture, Ill. Bul. 394.
 effect of plowing upon yield and eradication,
 Iowa Res. Bul. 162.
 Sweetpotatoes—
 for swine, Ga. Bul. 181.
 hogging off, La. Bul. 236.
 marketing, Ind. Bul. 370.
 Swine—
 brucelliasis in, Va. Tech. Bul. 48.
 houses, Tex. Bul. 486.
 molasses in fattening, Hawaii Bul. 69.
 prices, variations in, Iowa Res. Bul. 161.
 rice byproduct feeding, Ark. Bul. 303.
 roundworm, eradication by chenopodium, S.
 Dak. Bul. 283.
 sweetpotatoes for, Ga. Bul. 181.
Synanthedon pictipes, S. Dak. Bul. 288.
Taeniothrips gladioli, Ohio Bul. 537.
Taeniothrips inconsequens, Calif. Bul. 562.
 Tanks, water supply, Iowa Bul. 302.
 Tar distillate emulsions—
 for black cherry aphid, N. Y. State Bul. 637.
 for rosy aphid and fruit insects, N. Y. State Bul.
 636.
 Tar oil distillates, as dormant spray material, Va.
 Bul. 293.
 Tariff, effect on flaxseed production, Mont. Bul. 272.
 Tarnished plant bugs on beans, Idaho Res. Bul. 11.
 Taro, manufacture of poi from, Hawaii Bul. 70.
Tarsonemus pallidus, Minn. Tech. Bul. 93.
 Taxation—
 agriculture, N. C. Tech. Bul. 43.
 and cost of town government, N. Y. (Cornell)
 Bul. 598.
 and finance, county, Colo. Bul. 413.
 and government, Crittenden and Livingston
 Counties, Ky. Bul. 355.
 drainage district, Mo. Bul. 323.
 farm, Mont. Bul. 286.
 farm property, Maine Bul. 366.
 farm real estate, delinquency, S. C. Bul. 298.
 farm real estate, index, Ky. Bul. 352.
 processing tax and hog reduction program,
 Iowa Bul. 317.
 studies, Del. Bul. 182.
 tax delinquent rural lands, Ark. Bul. 311.
 Teeth—
 decay, in school children, Tex. Bul. 491.
 enamel and dentin of, effect of fluorine, Ariz.
 Tech. Bul. 52.
 mottled enamel, Ariz. Tech. Bul. 45.
 Temperature, effect on methylene blue reduction
 test, Vt. Bul. 374.
 Tenancy, farm, and leasing systems, Md. Bul. 352.
Thielariopsis paradoxa, Ariz. Tech. Bul. 48.
 Threshing, lima beans, injuries, Calif. Bul. 580.
 Thrips—
 bean, biology, Calif. Hilgardia, vol. 7, no. 12.
 gladiolus, control, Ohio Bul. 537.
 onions, resistant to, Calif. Hilgardia, vol. 8, no. 7.
 pear, Calif. Bul. 562.
 Thrush, in birds, yeast-like fungi associated with,
 Conn. (Storrs) Bul. 188.
 Tile drains. *See* Drains.
 Tillia, seed, dormancy in, N. Y. (Cornell) Mem.
 169.
 Tillage, blueberries, N. J. Bul. 558.
 Time studies, farm homes, Mont. Bul. 271.
 Timothy hay for dairy farm, Ohio Bul. 538.
 Tires, pneumatic, and steel wheels on tractors,
 compared, Nebr. Bul. 291.
 Tobacco—
 brown root rot, management of soils subject to,
 Md. Bul. 362.
 culture, Conn. (State) Bul. 364.
 curing, effect on organic acids of leaves, Conn.
 (State) Bul. 352.
 curing experiments, Conn. (State) Bul. 350, 359.
 damping-off and root rot, Conn. (State) Bul.
 359.
 fertilizers, tests, Conn. (State) Bul. 359; Md.
 Bul. 358.
 frenching, Ky. Bul. 349; Va. Tech. Bul. 49.
 green mold in seed bed, Conn. (State) Bul. 359.
 Havana, effect of cropping systems, Mass. Bul.
 297.
 insects, Conn. (State) Bul. 350.
 magnesium and calcium application, Conn.
 (State) Bul. 350.
 mosaic, control, N. C. Bul. 297.
 mosaic, effect of contaminated soil and cultural
 practices on spread, N. C. Tech. Bul. 46.
 plant, chemical investigations, Conn. (State)
 Bul. 352.
 seed bed, green mold, Conn. (State) Bul. 359.
 shade tent poles, preservation, Conn. (State)
 Bul. 359.
 substation, report, Conn. (State) Bul. 350, 359.
 weed fallow, in cropping system, Md. Bul. 362.
 Todd County, farm management, Ky. Bul. 347.
 Tokay grapes, marketing, Calif. Bul. 558.
 Tomato plant—
 effect of nitrogen, phosphorus, and potassium,
 Ark. Bul. 310.
 effect of potassium deficiency, N. H. Tech. Bul.
 59.
 variation in nitrogen, phosphorus, and potas-
 sium content, Ark. Bul. 288.
 Tomato psyllid—
 and control of psyllid yellows of potatoes, Colo.
 Bul. 410.
 lime-sulphur in control, Colo. Bul. 411.
 Tomatoes—
 breeding, N. Dak. Bul. 276.
 collar rot, Colo. Bul. 402.
 diseases, Md. Bul. 345.
 effect of fertilizers and rotation, N. Y. State Bul.
 619.
 Fusarium wilt, Md. Bul. 345.
 grade, field and harvest factors affecting, Ind.
 I ul. 394.
 leaf mold resistance, Ohio Bul. 539.
 lime-sulphur in control of psyllids, Colo. Bul.
 411.
 mosaic disease, Md. Bul. 345.
 pruning and training, Ark. Bul. 292; N. Y.
 (Cornell) Bul. 580.
See also Tomato plant.

Tompkins County—

food habits and health of farm families, N. Y. (Cornell) Bul. 563.

land utilization, economic study, N. Y. (Cornell) Bul. 590; Mem. 160.

Town—

and country relations, trends in, Wis. Res. Bul. 117.

government cost and taxes, N. Y. (Cornell) Bul. 598.

government, relation of community areas, N. Y. (Cornell) Bul. 555.

Townships and districts, real estate valuation averages, Ill. Bul. 399.

Toxaway loam. *See* Soils.

Tractors—

cost of operation, Ill. Bul. 395.

Diesel, operation costs, Mont. Bul. 289.

in potato growing, Pa. Bul. 306.

pneumatic tires and steel wheels, compared, Nebr. Bul. 291.

testing, Nebr. Bul. 277, 285.

Trade areas, rural, relation of villages and cities to changes in, N. Y. (Cornell) Bul. 582.

Trade centers—

farm, 1901-1931, La. Bul. 234.

growth and decline, S. Dak. Bul. 279.

Tradescantiae, chromosome structure, N. Y. State Tech. Bul. 220.

Translocation, relation to light, potassium and calcium deficiencies, Mich. Tech. Bul. 141.

Transportation, motor. *See* Trucks.

Trees—

deciduous, leaf feeding and gall making insects, Mich. Spec. Bul. 243.

European canker, W. Va. Bul. 261.

for western Kansas, Kans. Bul. 270.

forest, studies in tolerance, Vt. Bul. 379.

gases in stem, Minn. Tech. Bul. 99.

ornamental, Fla. Bul. 261.

size, and lumbering, Calif. Bul. 549.

wood borers on, Mich. Spec. Bul. 238.

See also Elm; Evergreens; Maple trees; Oak; Olive trees; Tung oil trees.

Trichogramma, in control of oriental fruit moth, Conn. (State) Bul. 353.

Trichogramma minutum, parasite of sugarcane moth borer, La. Bul. 235, 248.

Triglochin maritima, Wyo. Bul. 193.

Trout, food of, Oreg. Bul. 323.

Trucks, marketing livestock, Ky. Bul. 344; Mich. Spec. Bul. 235; Ohio Bul. 531.

Tully-Homer area, dairy farms, N. Y. (Cornell) Bul. 551.

Tung oil trees, bronzing, zinc sulphate for, Fla. Bul. 273.

Turkeys—

economic study, Md. Bul. 355.

eggs, cost of producing, Oreg. Bul. 333.

eggs, incubation, humidity and weight loss, Nebr. Res. Bul. 74.

production, Nebr. Bul. 280.

raising in semi-confinement, N. Mex. Bul. 208.

vitamin-A deficiency, Calif. Hilgardia, vol. 8, no. 9.

Udder—

dairy cows, functional individuality of mammary glands, Mo. Res. Bul. 211.

of cattle, growth and functions, Mo. Bul. 339.

Undulant fever—

in man, Mich. Mem. 1.

in man, relation to Brucelliosis in cattle and swine, Va. Tech. Bul. 48.

Unionville District, Chester County, social activities, Pa. Bul. 286.

Uromyces appendiculatus, Va. Tech. Bul. 51.

Ustilago spp., N. Y. State Tech. Bul. 221.

Utah agricultural experiment station, report, Utah Bul. 250.

Utensils—

dairy, sterilization, Pa. Bul. 296; Vt. Bul. 369.

for electric range, Wash. Bul. 283.

Vaccine, pigeon pox, use in fowl pox, R. I. Bul. 238.

Vegetable farming, N. J. Bul. 555.

Vegetable seed. *See* Seed, vegetable.

Vegetables—

cold storage studies, N. Y. (Cornell) Bul. 602.

freezing storage, changes in, Calif. Bul. 551.

irrigation, Iowa Bul. 308.

mixed carload, Tex. Bul. 497.

New York market price, N. J. Bul. 575.

of New York, sweet corn, N. Y. State [Horticultural monograph] 1934.

on muck soils, marketing, Ind. Bul. 592; N. Y. (Cornell) Bul. 572.

production, Genesee County, N. Y. (Cornell) Bul. 567.

production in Suffolk and Nassau Counties, N. Y. (Cornell) Bul. 611.

production, mulch paper in, Minn. Bul. 293.

soil management, Nebr. Bul. 278.

Venturia inaequalis, Maine Bul. 368; Mich. Spec. Bul. 230; N. Y. State Bul. 624.

Vermont agricultural experiment station, report, Vt. Bul. 360, 380.

Verticillium disease, chrysanthemums, Wash. Bul. 290.

Villages—

farm families, living in, Utah Bul. 249.

relation to changes in rural trade and social areas, N. Y. (Cornell) Bul. 582.

relationship of open-country population to, N. Y. (Cornell) Bul. 583.

Vines, density and arrangement, Calif. Hilgardia, vol. 8, no. 6.

Vineyards—

economic study, N. Y. (Cornell) Bul. 605.

soils, Westfield area, Chautauqua County, N. Y. (Cornell) Bul. 609.

See also Grapes.

Violets—

chromosome numbers and species characters, Vt. Bul. 367.

chromosome relations and fertility in diploid and tetraploid species hybrids, Vt. Bul. 378.

Virginia pine. *See* Pine.

Virus diseases, potato, isolated tuber-unit seed plants for control, Maine Bul. 370.

Vitamin—

- content, alfalfa hay, Colo. Tech. Bul. 4.
- content of carrots, Mont. Bul. 276.
- content of rutabagas, effect of storage, Mont. Bul. 277.
- deficiency and anemia, Ark. Bul. 286.

Vitamin A—

- and D activity of egg yolks of different color concentrations, Mo. Res. Bul. 205.
- avitaminosis in white rat, Ohio Bul. 545.
- content of alfalfa, effect of curing, N. J. Bul. 560.
- content of foods and feeds, Tex. Bul. 477.
- content of pimiento pepper, Ga. Bul. 177, 179.
- content, skim milk, standardized milk and cream, Nebr. Res. Bul. 69.
- deficiency in range cattle, Calif. Bul. 560.
- deficiency in turkeys, Calif. Hilgardia, vol. 8, no. 9.
- requirement for hens for egg production, Tex. Bul. 493.
- requirements, dairy cows, Tex. Bul. 495.
- supplements for chick feeding, Wash. Bul. 292.

Vitamin B—

- effect on lactation and growth, Ark. Bul. 284.
- variation of amount in ration, effect on rats, Mo. Res. Bul. 195.

Vitamin D—

- activity of egg yolk, Mo. Res. Bul. 205.
- fish oils as source for chicks, Wash. Bul. 284.
- in calf nutrition, Wis. Res. Bul. 115.
- in calf rations, Pa. Bul. 291.
- requirements of chickens, Wash. Bul. 299.
- requirements of chicks and laying hens, Pa. Bul. 303.

Vitamin E content of dairy feeds, Nebr. Res. Bul. 73.

Vitamins—

- of cranberries, effect of processing, Mass. Bul. 296.

See also Avitaminosis.

Wake County, farm families, growth, N. C. Bul. 298.

Walls, silo, Iowa Bul. 303.

Walnut husk fly, bionomics, Calif. Hilgardia, vol. 8, no. 11.

Walnuts—

- bacteriosis, Calif. Bul. 564.
- establishing orchards, Oreg. Bul. 315.

Warren County, farm management, Ky. Bul. 347.

Washington agricultural experiment station, report, Wash. Bul. 291, 305.

Washington County, rural social organization, Ark. Bul. 285.

Water—

- and mineral relations, crop rotations, lysimeter experiments, N. Y. State Tech. Bul. 212.
 - evaporation of, Tex. Bul. 484.
 - groundwater, principles governing its physical control, Utah Bul. 252.
 - quality, drainage basins and water resources, Nev. Bul. 136.
 - resources, Nev. Bul. 136.
 - saline and alkaline, effect on animals, Okla. Bul. 217.
 - supply tanks, design and construction, Iowa Bul. 302.
- See also* Drainage; Irrigation.

Watermelons—

- breeding, Calif. Hilgardia, vol. 7, no. 15.
- phytophthora rot, Ariz. Tech. Bul. 51.
- wilt, caused by *Fusarium nivium*, W. Va. Bul. 257.

Waterville, community development, N. Y. (Cornell) Bul. 608.

Wayne County, relation of cities and villages to changes in rural trade and social areas, N. Y. (Cornell) Bul. 582.

Weather, forty-six years observations, Ohio Bul. 544.

Weed fallow, in tobacco cropping system, Md. Bul. 363.

Weed killers, composition, Conn. (State) Bul. 346.

Weeds—

- arsenical sprays in control, Calif. Hilgardia, vol. 7, no. 9; vol. 8, no. 4.
 - chemicals for, Md. Bul. 362; N. Dak. Bul. 277.
 - control, sulphuric acid in sprays, Calif. Hilgardia, vol. 8, no. 4.
 - description and control, Colo. Bul. 403.
 - grass, of Nebraska, Nebr. Bul. 288.
 - overwintering, curly top virus, Calif. Hilgardia, vol. 8, no. 8.
- See also* Bindweed; Leafy spurge.

Weevils—

- in stored beans and cowpeas, Tenn. Bul. 150.
- See also* Bollweevil.

West Virginia agricultural experiment station, report, W. Va. Bul. 263.

Westfield area, Chautauqua County, vineyard soils, N. Y. (Cornell) Bul. 609.

Wheat—

- and wheat byproducts, for laying hens, S. Dak. Bul. 284.
 - composition, growth, and yield, effect of nitrogen, Wash. Bul. 296.
 - feeding cattle, Mo. Bul. 325.
 - handling, farmers' elevators, S. Dak. Bul. 282.
 - irrigation, critical period for applying water, Colo. Tech. Bul. 11.
 - jointworm, Utah Bul. 243.
 - loose smut, N. Y. State Tech. Bul. 221.
 - nutritive value as poultry feed, Kans. Bul. 268.
 - production, dryland, and irrigation, Colo. Bul. 404.
 - resistance to low temperature, Kans. Tech. Bul. 35.
 - strawworm and wheat jointworm, Utah Bul. 243.
 - varieties, compared, Wash. Bul. 289.
 - variety tests, dryland and irrigation, Colo. Bul. 404.
 - vs. milo for dairy cows, Tex. Bul. 480.
 - winter, cultural practices, Nebr. Bul. 286.
 - winter, production, S. Dak. Bul. 276.
 - winter, varieties, Nebr. Bul. 283.
- Wheels, tractor, studies, Nebr. Bul. 291.
- White elm. *See* Elm, white.
- White pine. *See* Pine, white.
- Wichita Valley, cotton under irrigation, Tex. Bul. 494.
- Wild flowers, North Dakota, N. Dak. Bul. 269.
- Wild morning-glory. *See* Bindweed.
- Wiltshire sides, N. Dak. Bul. 263.
- Wind electric plants, Iowa Bul. 297.

- Windrow pick-up baler, harvesting alfalfa, Iowa
Bul. 322.
- Winogradsky spontaneous culture method for
determining soil deficiencies, Iowa Res. Bul. 157.
- Wisconsin agricultural experiment station, report,
Wis. Bul. 425, 428.
- Wives, rural, changes in residence and occupation,
N. Y. (Cornell) Bul. 607.
- Women—
 farm, cash contribution to family income, Vt.
 Bul. 355.
 farm, energy cost of household tasks, Wash.
 Bul. 282.
 farm, use of time, Mont. Bul. 271.
 young, activities and problems, N. Y. (Cornell)
 Bul. 617.
- Wood borers, on deciduous trees, Mich. Spec. Bul.
238.
- Woodlands, farm, carrying capacities and grazing
injury, Ind. Bul. 391.
- Wool—
 effect of ration on, Okla. Bul. 220.
 inheritance, Hampshire-Rambouillet cross-
 breds, Wyo. Bul. 196.
- Woolly apple aphid, Tenn. Bul. 151.
- Worms—
 in lambs, N. C. Bul. 287.
 in swine, eradication by chenopodium, S. Dak.
 Bul. 283.
- Yearling cattle. *See* Cattle.
- Yeastlike fungi from gallinaceous birds, Conn.
(Storrs) Bul. 188.
- Yellow scale, internal anatomy, Calif. Hilgardia,
vol. 7, no. 11.
- Yellows. *See also* Aster yellows; Celery yellows.
- Young folks. *See* Farm youth.
- Zinc oxide, for damping-off, N. Y. State Bul. 650.
- Zinc sulphate, for bronzing of tung trees, Fla. Bul.
273.
- Zygadenus, livestock poisoning, Wyo. Bul. 194.

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